DOCUMENT RESUME

ED 320 012 CE 055 105

TITLE	Food and Nutrition 10-12.
INSTITUTION	Manitoba Dept. of Education, Winnipeg.
REPORT NO	ISBN-0-7711-0739-0
PUB DATE	88
NOTE	294p.
PUB TYPE	Guides - Classroom Use - Guides (For Teachers) (052)
EDRS PRICE	MF01/PC12 Plus Postage.
DESCRIPTORS	Classroom Techniques; Consumer Education; *Course Content; *Foods Instruction; Foreign Countries; High Schools; Home Economics; *Learning Activities; Learning Modules; Lesson Plans; *Nutrition Instruction; Skill Development; State Curriculum Guides; Teaching Methods; Test Items; Units of Study
IDENTIFIERS	*Manitoba

ABSTRACT

This curriculum guide for food and nutrition is part of the senior high home economics curriculum for the province of Manitoba. An overview presents a rationale for the curriculum, program goals and objectives, and implementation strategies. The topic of food and nutrition is divided into eight major concepts or topics: significance of food, consumer aspects of food and nutrition, family aspects of food and health, Canada's food supply, Canadian food practices, global food issues, careers in food, and planning, preparing, and serving meals. All major concepts are accompanied by major objectives that provide an overview of what the students should achieve through the study of a particular concept. Each major concept is further broken down into subconcepts, each of which includes a generalization. Student objectives, intended to develop the ideas presented in the generalizations, are provided in order to lead students from a simple to a more complex understanding of the subconcepts and ultimately, of the major concepts. Student activities are designed to help students achieve the stated objectives. A 23-item bibliography is included in the document. (KC)

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ISBN 0-7711-0739-0

Food and Nutrition 10-12 replaces Food for Thinking People 101 and Canadian Foodways 201 as well as related content found in Home Economics 101, Home Economics 201, and Home Economics 301. Teachers are encouraged to begin phasing in the new curriculum during the 1988-89 school year. The program becomes official curriculum in September, 1989.

ACKNOWLEDGEMENTS

Manitoba Education wishes to acknowledge the contributions of the following members of the Senior High Home Economics Steering Committee in the development of this guide.

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Manitoba Education wishes to acknowledge the following pilot teachers who field tested the curriculum:

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1986-87 Pilot--Family Studies

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Manitoba Education also acknowledges the work of the Home Economics Learning Materials Selection Committee that screened textual materials to match the curriculum:

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OVERVIEW

RATIONALE

"Home Economics is the only profession and body of knowledge which focuses on the family as its core and nucleus and works predominantly in a preventative, educational developmental mode, rather than remediation therapy or crisis intervention."[1]

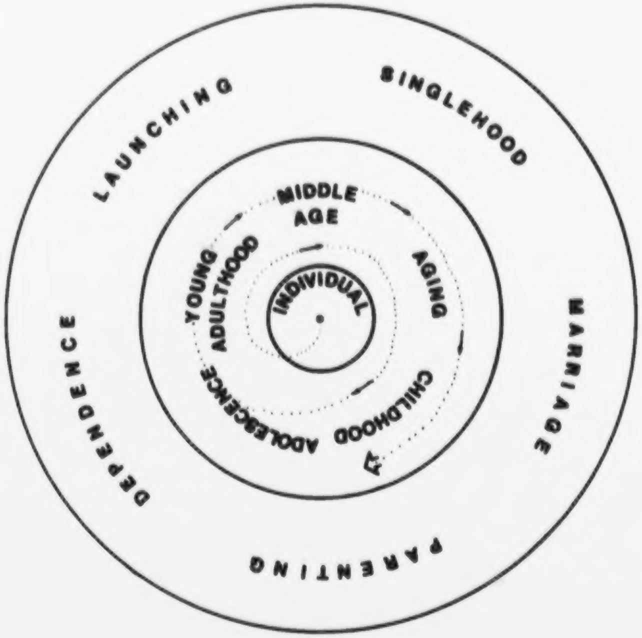
Home Economics builds upon the knowledge base of the human and natural sciences. It also integrates the theories and practices of those processes involved in daily living. Home Economics addresses the needs of our changing society and provides for lifelong learning in the areas of foods and nutrition, clothing, housing and design and family studies. The philosophy of the senior high school Home Economics curriculum emphasizes the growth and development of individuals and their environment. The program aspires to help increase the resourcefulness of young people and help them to live satisfying lives.

In a society of rapid change, the family is at risk. Home Economics deals in a developmental and preventative mode with the stresses that families are encountering today.

- family conflict and relationship breakdown
- child and family abuse
- family mobility
- changing technology
- substance abuse
- media
- unemployment (reduced income)
- single-parent families
- suicide
- adolescent mothers who keep their children
- self-inflicted lifestyle diseases
- consumer debt
- multicultural society
- housing

These stresses of everyday living have exerted pressures on the family as it has evolved, resulting in a diversity of family groupings. The evolution of the family is illustrated in the following diagram.

FAMILY LIFE CYCLE



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[1] Kinsey B. Green, "Advocates for the Family: A Global Crisis," Journal of Home Economics, 1982.

The Family Lifecycle refers to an individual's travel through stages as he/she ages chronologically. All stages may not be experienced by all individuals or may not occur sequentially.

Because of the importance of the family as the foundation upon which society is built, and because of the tremendous changes families and society are experiencing, adolescents today will benefit from courses which emphasize personal decision making, management skills, and personal and family development. Home Economics can help young people face the challenge of an increasingly complex and ever changing world. The Home Economics curriculum strives to help students recognize that they, through individual as well as joint efforts, can improve the standards and conditions for all, thus leading to an improved quality of life for themselves, their families and the rest of society.

In order to provide students with the necessary skills, knowledge and abilities to meet these challenges, this curriculum has been designed to allow for maximum flexibility. Whereas the previous curriculum conisted of ten separate documents, this curriculum has been simplified and consists of only three documents. Within each of these documents, it is possible to select major concepts which would be appropriate to any and all of the three grade levels. In addition, learning activities are suggested which can be adapted to all levels of learners and any classroom setting throughout the province. In this way, this new curriculum guide can address the goals and needs of all schools.

PROGRAM GOALS

The goals of the Home Economics program are to:

- Promote awareness of existing social, physical, economic and cultural conditions affecting individuals, homes and families.
- Encourage students to be analytical, evaluative and creative in thought and action.
- Help students to recognize that quality of life may be influenced by decisions and choices made throughout life.
- Develop in students management skills that are both manipulative and cognitive.
- Help students to identify and evaluate personal and environmental resources in effective lifestyle management.
- Help students to develop an ability to evaluate and affect societal change for the future.
- Help students to recognize that education for an optimal quality of life is a lifelong process.

PROGRAM OBJECTIVES FOR FOOD AND NUTRITION

- To determine what influences a student's choice of food.
- To analyze ethnic and religious influences on personal food selection.
- To describe some historic events that have influenced present-day food choices.
- To analyze the social influences of peers, society and the community on food use and selection.
- To analyze the psychological influences on food choices and preferences.
- To examine how geographic location affects food selection.

- To assess the effect of changing economic situations on the availability of food.
- To evaluate the relationship between lifestyles and food choices.
- To distinguish how the body converts food to energy through the processes of digestion and metabolism.
- To identify basic nutrients, their sources and their functions.
- To explain the purpose of the dietary standards.
- To determine the functions, sources and importance of water as well as the results of a deficiency.
- To differentiate among the three types of carbohydrates: starches, sugars and dietary fibre.
- To assess the importance of fibre in the diet.
- To identify the composition, functions and sources of fats.
- To differentiate between animal and vegetable sources of fat.
- To analyze current information about the role of fat intake on heart conditions.
- To describe the components of protein.
- To describe the digestion and metabolism of protein.
- To identify sources of protein.
- To describe the functions of protein and compile information on the effects of protein deficiencies on children and adults.
- To compare the current high cost of animal protein with low-cost vegetable protein alternatives.
- To identify sources of iron, calcium, phosphorus, iodine and fluorine.
- To identify the micro-nutrients that are considered essential to humans.
- To describe the functions of minerals in the body.
- To compare characteristics of fat-soluble and water-soluble vitamins.
- To identify the functions, sources and deficiencies of vitamins.
- To analyze the need for and hazard of vitamin supplementation.
- To recall "Canada's Food Guide" and its recommendations for daily intakes.
- To discover that nutrients are often interdependent in their functioning.
- To practice food exchange.
- To define fitness.
- To recognize physical conditions and mental attitudes related to improper food choices.
- To determine one's ideal weight and energy requirements.
- To evaluate one's own food choices.
- To analyze the relationship of food intake and personal needs.
- To determine the dangers of snacking.
- To establish improved snacking habits.
- To distinguish between empty-calorie foods, fast foods and nutritious foods.
- To analyze the reasons for the popularity of fast-food establishments.
- To evaluate the quality of the food served away from home sources.
- To recognize that foods chosen away from home contribute to the daily intake.
- To analyze currently popular dieting techniques for adequacy in meeting basic nutritional requirements, using "Canada's Food Guide."
- To distinguish between the characteristics of a fad diet and a reputable diet program.
- To apply diet information to daily food intake.
- To recognize that there are food and drug interactions.
- To assess the physical and nutritional risks of drug use and abuse.
- To distinguish between ideal weight, overweight, and obesity.
- To identify causes of obesity.
- To identify the dangers of obesity.
- To plan methods of treating obesity.
- To recognize disadvantages of being underweight.

- To identify the characteristics of anorexia nervosa.
- To recognize that anorexia nervosa is a pyschological disorder.
- To recognize the causes of iron deficiency in specific segments of the population.
- To recognize that prevention of osteoporosis resulting from calcium deficiencies is a life-long concern.
- To recognize food problems experienced by Native people.
- To plan a balanced low-calorie diet, using "Canada's Food Guide" recommendations and applying principles of good nutrition and other elements of good meal planning.
- To plan diets high in particular nutrients, thus meeting specific needs of individuals.
- To apply nutritional knowledge in the planning and preparation of meals which will meet the needs of the family.
- To identify the decision-making process leading to a plan of action.
- To apply the components of the decision-making process.
- To apply the decision-making process in the selection of marketed foods in various forms.
- To identify biological requirements for food.
- To explain sources of income.
- To explain that the size of one's income influences the proportion spent on food.
- To analyze the amount of time and mental and physical energy used in meeting food requirements.
- To analyze food planning and preparation activities.
- To develop ways in which money can be conserved by the judicious use of time and energy.
- To develop creative ways to produce and prepare food products.
- To appraise creatively prepared foods by comparing them with commercial food products.
- To identify and evaluate foods which are edible natural resources.
- To plan strategies for outdoor survival.
- To develop plans for home gardening and landscaping.
- To evaluate community food sources and available foods.
- To recognize that special food outlets offer interesting foods.
- To analyze shopping behaviors in consumers.
- To determine the nature, function, forms and effects of advertising.
- To appraise the ethics and controls of advertising methods used in the food industry.
- To list the information required on the packaging of food products.
- To analyze the suitability and cost of packaging materials and their effect on the environment.
- To evaluate the design qualities of certain packages.
- To analyze various forms of sales promotion.
- To compile information about legislation related to the food industry.
- To interpret effects of legislation on the food industry.
- To identify government and private consumer protection agencies.
- To appraise the role of government agencies in controlling activities of the food industry.
- To evaluate the role of consumer protection agencies.
- To develop strategies for resolving consumer problems related to food products.
- To recognize the importance of consciously melding traditions in creating a couple's own lifestyle.
- To evaluate menus of expanding families.
- To identify nutritional needs of children in various stages of infancy.
- To appraise methods of developing good eating habits in preschool children.
- To teach school-aged children basic facts about meeting their own food needs.
- To analyze and solve management problems that complicated schedules may impose upon the person preparing meals.

- To plan and prepare meals suitable for a family with adolescents.
- To recognize the need to change food planning, buying and preparation techniques.
- To discover some of the unique food experiences the community offers to the middle aged.
- To analyze the particular physical and environmental changes experienced by the elderly.
- To describe the process by which food ingested during pregnancy provides nourishment for both the mother and the fetus.
- To describe the effects of poor maternal nutrition on the baby and mother.
- To identify women who would be at high risk during pregnancy due to their nutritional status.
- To design strategies to ensure that pregnant teenagers meet their nutritional needs.
- To evaluate the benefits of preventive nutritional programs and good life-long dietary habits.
- To identify the three stages of infant feeding: the nursing period, the transitional period, the modified adult period (from Nutrition and Health).
- To examine the nutrient needs in early childhood.
- To recognize the need to provide children with nutrition education.
- To recognize the qualities of food that appeal to children.
- To evaluate the daily nutritional requirements of adolescents.
- To judge one's own eating habits.
- To practice adapting family meals to irregular schedules.
- To compare the nutritional needs of men and women.
- To predict why some adults fail to meet their recommended daily intakes.
- To plan appropriate food selections.
- To recognize that men and women must learn to prepare for the physiological and socio-economic changes associated with later years.
- To recognize changes in food and energy needs for the aged.
- To discuss the nutritional and eating problems of the elderly.
- To examine ways to improve the nutritional status of the elderly.
- To evaluate special eating patterns of athletes in training.
- To plan a pre-game meal.
- To identify common medical conditions which require special diets.
- To distinguish between various principles involved in planning special diets.
- To examine and apply exchange systems.
- To prepare meals for outdoor eating.
- To examine ways which will enable the handicapped person to meet individual food needs with maximum efficiency and minimum strain.
- To discover what makes parties and entertaining successful.
- To recognize that planning is involved in entertaining.
- To practice planning a party.
- To recognize daily nutrient requirements.
- To recognize the effects of different kinds of work and leisure activities and schedules on family meal patterns.
- To plan meals for a variety of household situations.
- To analyze ways people express their values through food patterns.
- To assess personal food habits.
- To generalize that different lifestyles allow varying amounts of time for food procurement and preparation.
- To compare the proportion of income spent on food at different income levels.
- To determine that nutritional status is related to income.
- To analyze savings to the family food budget when skills and time of individual family members are utilized.

- To recognize the pleasure and sense of achievement experienced by the family member who uses time and talent in food preparation for the family.
- To acknowledge that stress caused by employment demands can affect food patterns.
- To appraise the types of workplace food services locally available.
- To appraise the influence of the aesthetic qualities of foods on food preference.
- To recognize the effect of the media, family and peers on food preferences.
- To appraise personal changes and motivating influences in food preferences.
- To assess the degree to which Canada is able to meet the food needs of its population.
- To analyze the components of Canada's primary food industry.
- To recognize the importance of controlling production of supply.
- To examine the effect of climate, topography and urban growth upon Canada's capacity to produce an adequate food supply.
- To recognize the variety of food production enterprises.
- To recognize factors influencing costs in the primary industries.
- To evaluate the role of organizations directly affecting food producers.
- To recognize the importance of soil conservation for future food production.
- To appraise the importance of imported foods in meeting Canadian food needs.
- To identify the types of food products made in Manitoba and the location of the manufacturing plant.
- To evaluate processes involved in the preparation and production of food products.
- To recognize processes involved in the preservation and production of food products.
- To compare preservation methods in terms of their advantages and disadvantages.
- To evaluate different market forms and their "best use."
- To recognize that many "additives" occur naturally in foods.
- To identify the purpose of additives in food products.
- To discuss critically the implications of the use of additives.
- To predict the outcome of omitting additives.
- To identify the variety of new food products on the market and recognize the reasons for their development.
- To determine the acceptability and palatability of fabricated food substitutes.
- To examine and differentiate between recent innovations in engineered foods.
- To predict future trends and usefulness of synthetic food products.
- To examine recent innovations in the farming industry.
- To identify the importance of an effective distribution system related to the food market.
- To assess the role of local marketing boards.
- To recognize the availability of local food products.
- To compare the advantages and disadvantages to the consumer of different food retail outlets.
- To discuss critically the importance of having a variety of retail food outlets.
- To recognize that a few companies have control over all stages of food production and distribution.
- To discover that food cooperatives are becoming multi-product conglomerates.
- To recognize that food companies are often transnational.
- To evaluate the effect of corporate control on both producer and consumer.
- To identify forms of production technology and their effects on employment opportunities.
- To evaluate the effect of technology on food.

- To identify the role of computers in the distribution of foods.
- To analyze the effects of new technology on family lifestyle and food acquisition.
- To evaluate the significance of commodity specialists in the marketplace.
- To analyze the effects of supply and demand in establishing prices for certain foodstuffs.
- To discover the importance of aesthetic appeal in consumer choice.
- To identify and analyze marketing practices which encourage buying.
- To analyze the savings realized by families through the practice of bulk buying.
- To identify current trends in the food industry.
- To assess the influence of advertising.
- To demonstrate that advertisements can be misleading without actually making false claims.
- To establish guidelines for evaluating claims and analyzing concerns found in magazines and books and on television and radio.
- To discover the interrelatedness of lifestyle and food ways of Native peoples.
- To identify sources of nutrients in Native diets.
- To research preservation methods used by pioneers.
- To discover the significance of food in the life of the pioneer.
- To produce samples of pioneer foods.
- To research and discuss regional festivals and folklore concerning food.
- To prepare regional specialties from across Canada.
- To identify various Canadian communities which were settled by specific ethnic groups.
- To investigate and appreciate the contributions of various cultures.
- To discover all the sources of ethnic foods in your community.
- To develop an awareness and appreciation of different food practices.

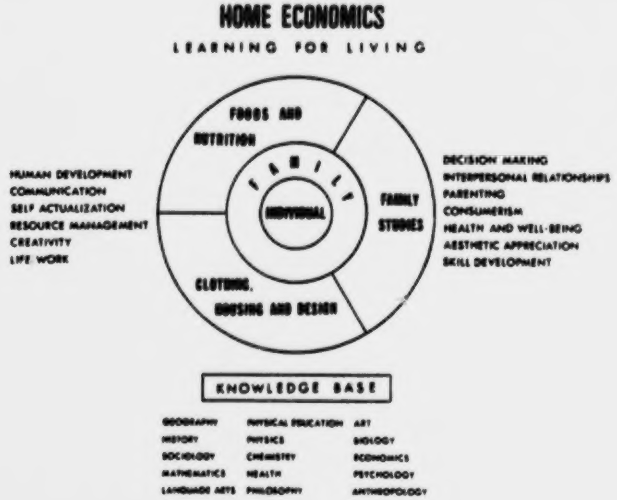
- To create an awareness of current trends on Canadians' nutritional status.
- To identify the numerous diseases which are related to diet but not necessarily caused by diet.
- To collect information about factors posing personal health risks.
- To assess the relationship between diet and life-threatening diseases.
- To pursue a lifestyle reducing the potential for diet-related diseases.
- To be aware of world food issues.
- To identify causes of food shortages.
- to identify world food shortages resulting from limited resources.
- To identify political factors contributing to world food shortages.
- To identify economic factors contributing to world food shortages.
- To identify social factors contributing to world food shortages.
- To compare malnutrition with undernutrition.
- To describe the deficiency diseases.
- To describe progressive physical and mental changes associated with starvation.
- To appraise the impact of famine and starvation on social interaction and socio-economic problems.
- To evaluate ways of introducing new foods and changing old habits.
- To differentiate between acute and chronic food shortage.
- To discover ways in which food supplies could be increased in less developed countries.
- To identify organizations which help to alleviate world food crisis.
- To identify the aspects of organization and planning required in food production.
- To describe the factors requiring consideration when developing menus.
- To develop suitable menus.
- To practice recipe costing.

- To identify procedures for making a work schedule.
- To prepare a work schedule.
- To organize guidelines for developing wise food purchasing and storage strategies.
- To examine the vast and varied knowledge required of food service personnel.
- To apply procedures of quantity food production: enlarging recipes, preserving quality.
- To practice enlarging standard recipes.
- To discover the optimum time, methods, temperatures and serving procedures for quantity cooking that will best preserve nutritive and other qualitative values in all common foods.
- To practice quantity food production.
- To discover the job opportunities within the food industry in production, processing, distribution and merchandising.
- To analyze personal aptitudes and academic training needed for specific careers.
- To collect information about entry level jobs.
- To analyze the personal qualifications required for entry-level jobs.
- To recognize the training and aptitudes required at the skilled level.
- To investigate the different types of catering.
- To interpret the reasons for the popularity of catering.
- To examine the job requirements of a caterer.
- To investigate the requirements for establishing a private business.
- To discuss critically the advantages and disadvantages of sole proprietorship.
- To define and describe a corporation.
- To distinguish between large, corporately owned business and privately owned business.
- To discuss the role of different managers in food-related positions.
- To generalize that an intensive study in a particular field is a major prerequisite for assuming professional responsibilities.
- To plan, prepare and serve meals to suit different family needs for different occasions.
- To recognize that lifestyle, family composition and size, budget, preparation time, availability of foods, and family food preferences all affect the planning of menus and purchasing of foods.
- To complete a useful shopping list considering foods on hand, advertised specials, planned menus, and store layout.
- To identify and analyze marketing practices which encourage impulse buying and overbuying.
- To evaluate "sales," identifying in-store specials, loss leaders and nationally advertised product sales.
- To discuss critically advantages and disadvantages of different kinds of stores.
- To discuss critically conditions which reduce nutrient levels.
- To evaluate the nutrient losses in the various techniques of food preservation.
- To analyze ways to reduce energy use.
- To analyze ways to use time and personal energy to advantage.
- To discover proper methods of preparing, serving and storing foods to prevent food-borne illnesses.
- To determine standards for personal hygiene and kitchen cleanliness to prevent food-borne illness.
- To identify other food-related illnesses.
- To determine the most common accidents in the kitchen so as to prevent them.
- To plan and prepare meals with a variety of colors, flavors, textures and temperatures.
- To evaluate meals prepared in class.
- To discuss critically menus planned for a variety of situations.
- To discover the fat and carbohydrate composition of foods.

- To compare the stability of several kinds of fats.
- To determine factors that affect carbohydrate foods.
- To determine what affects the acceptability of food.
- To determine factors that affect the quality of baked goods.
- To determine factors that influence the quality of products made with milk, cheese or designed "milk products."
- To determine factors that influence the quality of egg products.
- To analyze factors that affect the palatability and texture of meat and fish products.
- To discover factors that affect quality of preserved food.

IMPLEMENTATION STRATEGIES

Each of the three areas of study are linked through key concepts. The following diagram visually demonstrates the general philosophy, the knowledge base and key concepts which are applicable to all three courses.


HOME ECONOMICS
LEARNING FOR LIVING
FOODS AND NUTRITION
FAMILY
INDIVIDUAL
FAMILY STUDIES
CLOTHING, HOUSING AND DESIGN
HUMAN DEVELOPMENT
COMMUNICATION
SELF ACTUALIZATION
RESOURCE MANAGEMENT
CREATIVITY
LIFE WORK
DECISION MAKING
INTERPERSONAL RELATIONSHIPS
PARENTING
CONSUMERISM
HEALTH AND WELL-BEING
AESTHETIC APPRECIATION
SKILL DEVELOPMENT
KNOWLEDGE BASE
GEOGRAPHY
HISTORY
SOCIOLOGY
MATHEMATICS
LANGUAGE ARTS
PHYSICAL EDUCATION
PHYSICS
CHEMISTRY
HEALTH
PHILOSOPHY
ART
BIOLOGY
ECONOMICS
PSYCHOLOGY
ANTHROPOLOGY

Unlimited flexibility is incorporated into the structure of this program. The curriculum is designed to be co-educational, non-sequential and requires no prerequisite courses, specially designed classrooms or laboratories. Administrators and teachers are, therefore, able to select, according to individual or school needs and facilities, specific courses or combination of courses from the three different areas of Home Economics that are identified within this guide. These three different areas are referred to as Food and Nutrition, Clothing, Housing and Design and Family Studies. It should, however, be taken into consideration that students who choose a higher level course than that for which they have no previous experience should review previous levels or be guided into another, more appropriate one.

Each of the three areas, Food and Nutrition, Clothing, Housing and Design and Family Studies, are offered at all three grade levels, grade 10, grade 11 and grade 12. Within each of the three grade levels and within each of the three designated areas, specific major concepts are identified as being required in order that a student receive a full credit. These nine possible one-credit courses all require the equivalent of 110-120 hours of study. The major concepts that are identified as obligatory for a full credit in any one of the three designated areas are found in the scope and sequence chart.

Credit System

Half-credit courses in any of the three areas of study at any of the three grade levels are possible by combining selected major concepts based on student needs, previous experiences, available time, level of activity and budget. All are to be designated Home Economics (General). For example, students may not be granted a one-half credit in Food and Nutrition but, rather, a one-half credit in Home Economics (General)

SCOPE AND SEQUENCE CHART

FOOD AND NUTRITION

Grade 10

Concept Number I: Significance of Food
Concept Number II: Consumer Aspects of Food and Nutrition
Concept Number VIII: Planning, Preparing and Serving Food

Grade 11

Concept Number III: Factors Affecting Family Food and Health
Concept Number IV: Canada's Food Supply
Concept Number V: Canadian Mosaic
Concept Number VIII: Planning, Preparing and Serving Food

Grade 12

Concept Number VI: Canada and World Food Problems
Concept Number VII: Careers in Food
Concept Number VIII: Planning, Preparing and Serving Food

CLOTHING, HOUSING AND DESIGN

Grade 10

Concept Number I: Significance of Clothing and Textiles
Concept Number VI: Creativity and Design
Concept Number VII: Practical Applications of Creativity and Design
Concept Number VIII: Careers in Clothing, Textiles and Housing

Grade 11

Concept Number II: Significance of Living and Working Environments
Concept Number IV: Consumer Aspects of Clothing and Textiles
Concept Number VII: Practical Applications of Creativity and Design

Grade 12

Concept Number III: Factors Affecting Family and Lifestyle
Concept Number V: Consumer Aspects in Housing
Concept Number VII: Practical Applications of Creativity and Design
Concept Number VIII: Careers in Clothing, Textiles and Housing

FAMILY STUDIES

Grade 10

Concept Number I: Caregiving
Concept Number II: Careers and Volunteer Activities Related to Children
Concept Number III: Studying Children
Concept Number IV: Fundamentals of Development
Concept Number V: Prenatal Development
Concept Number VI: Birth
Concept Number VII: The Infant
Concept Number VIII: The Preschool Child
Concept Number IX: Parenting: Role of the Caregiver

Grade 11

Concept Number X: Human Needs
Concept Number XI: Studying Children
Concept Number XII: The Nurturing Environment
Concept Number XIII: Physical Growth and Development
Concept Number XIV: Intellectual Develop-
Concept Number XV: Emotional Development
Concept Number XVI: Social Development
Concept Number XVII: Play
Concept Number XVIII: The Importance of Parenting

Grade 12

Concept Number XIX: Human Development
Concept Number XX: Personal Development
Concept Number XXI: Self-Management
Concept Number XXII: Preparation for Life Work
Concept Number XXIII: Social Development
Concept Number XXIV: Relationships
Concept Number XXV: Family and Society
Concept Number XXVI: Family Management
Concept Number XXVII: Building a Family
Concept Number XXVIII: The Changing Family

even if the one-half credit was offered specifically in Food and Nutrition. If more than one-half credit is offered by combining a minimum of two separate courses--i.e., Food and Nutrition and Clothing, Housing and Design--one credit applies, but it also is to be called Home Economics (General). Students may only be granted credits in each of the three designated areas of Food and Nutrition, Clothing, Housing and Design, and Family Studies if they are enrolled in a full-credit course and if the major concepts listed above are taught at the appropriate level. Any other full or half-credit course or combination of courses are designated Home Economics (General).

Levels of Instruction

Within any of the possible full- or half-credit courses, there are three different levels of instruction. These three levels are the basic, intermediate and advanced levels, and they are designed in such a way that they may be taught at one time in the classroom. It is possible, then, at the conclusion of the course, that three different credits will be granted to students. The basic level, recognizable by a (B) next to a suggested activity, provides activities aimed at meeting the needs, interests and abilities of students who require a basic or simplified understanding of the intended objectives and concepts. Depending on the individuals within the classroom, the curriculum is designed so that a teacher may choose to incorporate only those objectives and activities aimed at the basic level. However, as these activities are not intended only for students who are capable of the lowest level of difficulty, but rather are a starting point for all the students in the classroom, a teacher may choose to further build upon them with increasingly more complex activities. Such activities are identified as being the intermediate level (I) and are oriented towards the student whose needs, abilities and interests are less limited than those at the basic levels. These activities take the student beyond a basic comprehension by developing these same ideas to a more complex level. The advanced level (A), which encourages individual self-direction through exploration, research and evaluation, is designed to provide challenges intended to meet the requirements of the student who is more highly motivated and requires increased sophistication in both concepts and content. These activities are at the highest level of difficulty addressed by this curriculum guide.

The following, therefore, is a summary of possible options that may be offered by any school.

Food and Nutrition

Grade 10: Basic, Intermediate, Advanced
Grade 11: Basic, Intermediate, Advanced
Grade 12: Basic, Intermediate, Advanced

(1-credit courses)

Clothing, Housing and Design

Grade 10: Basic, Intermediate, Advanced
Grade 11: Basic, Intermediate, Advanced
Grade 12: Basic, Intermediate, Advanced

(1-credit courses)

Family Studies

Grade 10: Basic, Intermediate, Advanced
Grade 11: Basic, Intermediate, Advanced
Grade 12: Basic, Intermediate, Advanced

(1-credit courses)

Home Economics (General)

Grade 10: Basic, Intermediate
Grade 11: Basic, Intermediate
Grade 12: Basic, Intermediate

(one-half or 1-credit courses)

It is probable that large, urban centres will be able to offer a wider variety of full- or half-credit courses on a year-after-year basis because of more readily available facilities; smaller rural or northern centres may not have the freedom or facilities to offer the same courses on as regular a cycle. Under such circumstances, it is recommended that courses offered be rotated from year to year. This rotation could allow students to complete anywhere from one-half to three or more full credits over a three-year period. In addition, if facilities for a course such as Family Studies appear to be problematic, it is recommended that the course be offered in the classroom and that community resources such as day-care centres, nursery schools, or nursing homes be explored for observation or practical experience.

These practicums are an integral part of the Home Economics curriculum and are, therefore, included at every level of every course. It is the intent of this curriculum guide that approximately 40-60 percent of time spent in each of the three curriculum areas be of this practical nature.

DESIGN OF THE GUIDE

This curriculum guide is one of three composing the Senior High Home Economics curriculum.

Each of the three individual areas of study are subdivided into several major concepts or topics. As each curriculum guide is intended to provide information and experience for students in grades 10, 11 and 12, only selected topics are taught at each grade level. Guidelines as to the selection of concepts required at each grade level is located in this overview under "Implementation Strategies."

All major concepts are accompanied by major objectives. These major objectives provide an overview of what the students should achieve through the study of a particular concept.

Each of these major concepts are further broken down into subconcepts, with each subconcept including a generalization that refers to common, readily understood situations rather than unique or specific circumstances. These generalizations help students in their thinking and overall understanding of the sub-concept and provide a foundation for the more detailed objectives to follow.

Student objectives, intended to serve to develop the ideas presented in the generalizations, are presented in such a way that they lead the student from a simple to a more complex understanding of the sub- and, ultimately, major concepts.

Student activities are designed to help the students achieve the stated objectives. These suggested experiences are varied and sequenced so that they lead the student from a very basic to a deeper, more analytical understanding of the concept. (See Section on Special Needs.)

In general, selection of activities should be based on the individual abilities of students and on the intended level of instruction. Activities at these various levels help students to acquire varying degrees of knowledge and skills as well as to develop an appreciation for the topic.

This guide is designed to provide information and experience in three distinct areas of study for students in grades 10, 11 and 12 who are at different levels of interest and ability. As a result, it pursues an extremely wide and diverse range of topics and experiences. Such diversity makes it impossible to employ only one orientation or curriculum strategy. The model, therefore, upon which this program is developed can be termed "eclectic." It incorporates all five orientations as outlined by Eisner and Vallance in Conflicting Conceptions of Curriculum. These five orientations are as follows:

1. Development of Cognitive Processes: This orientation is concerned less with curriculum content than with sharpening the student's intellect by developing cognitive skills that can be applied to learning virtually anything.

2. Academic Rationalism: This is the most basic orientation to curriculum. It argues that the function of the school is to cultivate intellectual growth in the discipline deemed the most valuable. Schools that devote time and resources to subject matter that does not meet these requirements are depriving students of the intellectual tools they need to cope in society.

3. Personal Relevance: This approach is clearly child or learner centered. Education is seen as a way to help individuals discover things for themselves and, thus, provides for personally gratifying and enriching experience.

4. Social Adaptation and Social Reconstruction: This fourth orientation to curriculum emphasizes that the goals of education are to serve the interests of society rather than to serve individual needs. The focus, therefore, is to provide the learner with experiences that are relevant and address the social needs as they have been identified.

5. Curriculum as Technology: The focus of this orientation is on the process of learning. It provides the learner with efficient means to achieving clearly defined and meaningful goals.

APPROVED AND RECOMMENDED BOOKS FOR FOOD AND NUTRITION

Major Concept: Significance of Food

Guide to Modern Meals
Food For Today
Guide to Good Food
Focus on Nutrition
Living Nutrition
The World of Food

Major Concept: Consumer Aspects of Food and Nutrition

Guide to Modern Meals
Food For Today
Guide to Good Food

Major Concept: Factors Affecting Family, Food and Health

Guide to Modern Meals
Food For Today
Guide to Good Food
Living Nutrition

Major Concept: Canada's Food Supply

Guide to Modern Meals
Food For Today
Guide to Good Food
Focus on Nutrition

Major Concept: Canadian Mosaic

Guide to Modern Meals
Food For Today
Guide to Good Food

Major Concept: Global Food Issues

Guide to Modern Meals
Food For Today
Guide to Good Food
Living Nutrition

Major Concept: Careers in Food

Guide to Modern Meals
Food For Today
Guide to Good Food

Major Concept: Planning, Preparing and Serving Meals

Guide to Modern Meals
Food For Today
Guide to Good Food
Food Chemistry: An Optional Package for Chemistry 300
Food Chemistry Activities

SPECIAL NEEDS*

Home Economics teaches a set of skills which students with special needs require to become independent. Teaching these students successfully requires knowledge of their characteristics and of effective ways of teaching them as well as a desire to release the potential of these students for satisfying personal and family living.

Special students should participate in Home Economics courses at the level of difficulty permitted by their interests and aptitudes. Teachers should be prepared to make appropriate program adaptations for students with a variety of exceptionalities. These adaptions can be made in the areas of teaching strategies, pacing, assessment and evaluation, facilities, equipment and the use of resources.

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* The sections on Special Needs, Adult Students and Multiculturalism have been adapted from "Consideration in Adapting Programs," Family Studies: Intermediate and Senior Divisions and OAC 1987 (Toronto: Ontario Ministry of Education, 1987), pp. 13-16. Used with permission.

Teachers and administrators have identified five areas of educational needs for special students. These are:

1. positive self-concept development
2. socialization skills
3. daily living activities experiences
4. independence
5. occupational skill development and employability

Special needs may be categorized as:

1. students with behavior exceptionalities
2. students with communication exceptionalities
3. students with physical exceptionalities
4. students with intellectual exceptionalities (other than gifted)
5. students with intellectual exceptionalities (gifted)

CONSIDERATIONS OF LEARNER NEEDS

Suggestions in the form of a checklist are presented for teacher consideration.

Students with Behavioral Exceptionalities

- Instructions should be expressed clearly and concisely.
- Additional supervision should be provided when students are working with potentially dangerous tools and equipment.
- Tasks should be assigned at the student's level of ability in order to maximize his or her opportunities for success and satisfaction.
- Students who are compatible should be paired together whenever possible.
- Routines should be consistent and carried out with minimal disruption.
- Students should understand their specific tasks at the beginning of an activity, and a regular schedule of activities should be maintained.
- Acceptable behavior should receive positive reinforcement.
- The disciplinary consequences of misbehavior should be consistent, in order to ensure that the students involved understand the cause-and-effect relationship.

Students with Communication Exceptionalities

- New vocabulary should be taught in context.
- Teachers should obtain the full attention of the students before beginning a lesson.
- Students should be paired with others who can assist them if necessary.
- Students should be provided with visual as well as auditory clues for reinforcement.
- Objects used in class activities should be labelled.
- Teachers should enunciate clearly and rephrase any question or statement students do not understand.
- Classroom distractions that are not normally part of the work situation should be eliminated or reduced to a minimum.
- Alternative modes of communication (e.g., microcomputers and appropriate software) should be used in order to eliminate physical barriers to self-expression.

Students with Physical Exceptionalities

- Students can benefit from working with a partner (e.g., for note taking).
- Disabled students may need placement near the entrance to the classroom.
- Extra time may have to be provided for students to complete assignments.
- The amount of writing should be reduced; writing could in some cases be replaced by alternative methods (e.g., tape recorders).

- Videotapes of sessions involving demonstrations would be useful for students who are frequently absent.
- Additional space and modified equipment or tools may be required to accommodate wheelchairs or other ambulatory devices.
- Floors should be free of obstructions and covered with non-slip materials.
- Students who are unable to communicate by talking or writing with a pencil or pen should be provided with microcomputers, Bliss boards, or other devices.

Students with Intellectual Exceptionalities (Other Than Gifted)

- Rules should be expressed simply, clearly, and consistently.
- Teachers should give students sequential instructions with logical steps.
- New skills should be demonstrated and their practice supervised, especially when activities involve the use of potentially dangerous equipment.
- Students should be given immediate feedback.
- Functional reading should be reinforced in each lesson, wherever possible.
- Some students will need to be involved in individual activities.
- The reading level of the student should determine the choice of print materials.
- The level of understanding of the student should influence the choice of print and non-print materials.
- The development of individual skills should be stressed and competition avoided.
- Creativity should be encouraged.
- Improvements in levels of performance should be expected, encouraged, and applauded.

Students with Intellectual Exceptionalities (Gifted)

- Teachers should encourage and foster creativity, original thinking, and the cognitive skills of analysis, synthesis, and evaluation.
- Students should be encouraged to develop organizational and leadership skills through class presentations using new technology and a wide variety of media.
- Individual projects requiring independent study should be emphasized.
- Facilities, personnel, and equipment from outside the school should be used.
- The expertise of knowledgeable people in the community should be drawn on to enhance learning activities.
- High standards requiring students to extend themselves should be encouraged.

ADULT STUDENTS

Adults enrolled in regular school programs may be placed in classes composed exclusively of adults, or they may be integrated with adolescent students. Relatively small adjustments in planning may provide substantial benefits for adult learners and also enrich the experiences of adolescent students.

Teachers should keep in mind the observations below when planning courses for adult students.

- Adult learners often bring a rich store of practical experience with them. Classroom activities can be designed to draw on this knowledge and experience.
- Adults often learn best in groups and welcome the support of other learners. Activities that foster social interaction will result in more effective learning. Through such activities each learner becomes a resource for the others.

- Some adults learn effectively through active involvement. Strategies that balance experiential activity with theoretical presentations will enhance their learning.
- Adults tend to focus on the present and to be *problem-oriented*. Teachers will need to build on the expressed learning needs of their students.
- Adults, like adolescents, exhibit a range of learning styles. These individual differences may be accomodated through activities involving independent study.

Adult-learning theory suggests that adults tend to be highly self-directed and responsible. Such generalizations, however, may overlook exceptional cases (for example, an adult who was chronically ill as a child). Teachers must decide to what extent the generalizations and recommendations in the list above can be applied to learners in a particular class.

Home Economics courses provide good opportunities for the interaction of adult learners and adolescents, in which both can recount their experiences and explain their points of view. This combination of adults and adolescents tends to have a positive effect, since it is non-threatening for both; moreover, the interaction should help each group to develop a better understanding of the other.

MULTICULTURALISM

The study of family groups leads students to understand that certain basic living activities, functions, and celebrations are common to all, although at times they may be expressed differently, even within the same culture or racial group. An understanding of this fact can promote caring and friendship among class members.

Multicultural experiences should be designed in order to encourage students to develop:

- empathy both for members of their own families and for *others* whose cultural and racial heritage and family style are different from their own;
- respect for cultural and racial differences among contemporary Canadian families;
- awareness of the variety of family traditions and lifestyles represented in Canada, as manifested in the range of values and ideologies within the multicultural and multiracial mosaic of Canadian society;
- appreciation of the ways in which individuals and families are socialized in Canadian society;
- understanding of the ways in which the family traditions of an individual's particular culture or race are an important component of his or her family life;
- familiarity with the food traditions of many cultures through a variety of experiences with food, in order to promote an understanding of the social, psychological, and cultural significance of food to individuals and families.

Students of Home Economics should learn to recognize that similarities and differences in their cultural and racial backgrounds are an integral part of Canadian society.

EVALUATION

The purpose of evaluation is to determine whether the stated objectives have been met. As numerous topics and teaching strategies are employed within this curriculum, a great variety of different evaluation techniques must also be used in order to measure fairly whether the objective has been attained.

Evaluation techniques should include regular assignments, tests, field trip reports, practicums, observational evaluation and self-evaluation and should be chosen on their ability to measure whatever learning needs to be evaluated.

Teachers should assess students' ability to function as learners at the basic, intermediate or advanced level.

EVALUATION TECHNIQUES AND METHODS

- The choice of evaluation procedure will reflect the purposes for which results will be used.
- The greater the variety of evaluation techniques used, the more probable it is that judgement will be fair.
- Motivation and achievement are affected by the type of evaluation method chosen.
- The intent of an objective and the method used to evaluate should be related.
- To be sound, the procedure selected must measure the content it is chosen to measure.
- The type of subject matter taught affects the choice of evaluation techniques.
- Attitudes are more likely to be positive if students participate in determining objectives, selecting means of evaluation, and evaluating their own progress.
- When learners can use self-evaluation techniques, they are better able to identify their own needs and to take initiative in learning.
- The effectiveness of evaluation techniques is affected by the balance between the validity, reliability, and the usability of the evaluation techniques selected.

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food and nutrition 10-12

I. MAJOR CONCEPT: Significance of Food

MAJOR OBJECTIVES: To appraise the effects of food on daily living and fitness
To appraise knowledge to enrich the students' quality of life

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
A. FACTORS AFFECTING FOOD CHOICES Food practices are expressions of oneself as an individual and as a member of a family. They are a result of the totality of lifetime experiences.		
1. Individual Preference		
Individual food preference is a result of association and meaningful experience.	To determine what influences a student's choice of food.	Have students make lists of their favorite foods. Discuss the reasons for these food preferences and why attitudes towards particular foods vary. (B) Have students fill in their preferences according to the following categories: (B) Foods and Its Uses · favorite food of the family · food mother would fix · food that can be fixed in many different ways · healthy food · food to eat every day · food for special occasions · food to eat when away from home

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. easy food to fix for breakfast; for lunch; for dinner . food for snacking--for children; for adults . food that is filling . food that is easy to digest . food to eat to lose weight . food to eat when alone . consoling food to eat when unhappy . food to eat as a reward . food to buy to stretch the budget . food to eliminate when prices rise Play a Sensory Game: . identify foods that are miscolored or mistextured, . identify seasonings/spices. (B) LAB EXPERIENCE: Have students prepare a favorite food. Have them determine the basis for food preference, considering availability, taste, odor, texture, nutritive value, etc. (B)
2. Historic, Cultural, and Religious Influences		
The availability of food and changes in food choices throughout history as well as the cultural and religious beliefs of families influence their dietary practices and customs.	To analyze ethnic and religious influences on personal food selection.	Have students choose a food from those eaten that day. Have them trace the origin of the food. (Some foods have very interesting histories and have had a great influence on history itself; e.g., coffee, tea, milk, potatoes, sugar, corn, spices, alcohol, bread, other beverages.) (B)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students survey home refrigerator, pantry or food storage shelves. Have them list those foods which have a special history and describe what these foods mean today. (I)
	To describe some historic events that have influenced present-day food choices.	Have students trace the origins of agriculture from the earliest stages through the long and complex chain of events resulting in today's technology. (A)
		LAB EXPERIENCE: Have students prepare a food from one of their own ethnic backgrounds or that of a friend, or any other cultural group of interest or choice. (B)
3. Social, Physiological and Psychological Influences		
Food is used to satisfy basic physical, psychological and social needs of individuals.	To analyze the social influences of peers, society and the community on food use and selection.	Discuss the statement: "Food or eating is very much a social experience." Include discussion on the role of food for parties, entertaining and gift giving. (B)
		Have students identify ways in which peer pressure can influence food choices. (B)
		Have students collect (B) and analyze (A) food advertisements in terms of their messages about "in" foods for health, weight control.
		Have students discuss and/or research the statement, "Dietary habits, which are very much a product of the social influences with which an individual is surrounded, exert a powerful effect on nutrition" (from *Success in Nutrition*). (A)

LAB EXPERIENCE: Have students prepare a food that they have learned to like in a friend's home. (B)

To analyze the psychological influences on food choices and preferences.

Have students give examples of how food is used during childhood:

- as an ego builder
- as a way to provide security
- as a way to relieve boredom
- as a pacifier
- as a reward/bribe
- as a creativity stimulator

Have students list examples of foods or restaurants which are considered to be high "status" or "prestige." (B)

Have students describe events in their lives that have important food associations; e.g., birthdays, Christmas, weddings, Passover, Easter, Thanksgiving. (B)

Have students recall parents' statements in which food was used as a bribe, especially for young children. How else do adults (e.g., business people or salespeople) use food as bribes? (B)

Discuss the following:

- During infancy, food establishes an emotional relationship between parents and children. Children learn love, affection, security, and trust in the environment from the eating experience. (B)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. Obesity is sometimes the result of a conflict between parent and child. Food has become a weapon for self- and parental punishment.
4. Economic Influences The availability of a food and the economic situation of a family are influential in establishing eating patterns.	To examine how geographic location affects food selection.	Have students choose three different geographic areas in Canada. Have them determine how this location may affect a person's food selection; e.g., northern community, rural setting, coastal setting, eastern city. (I)
	To assess the effect of changing economic situations on the availability of food.	Have students discuss: "If one of your favorite foods was limited 'one to a customer' because of short supply, would you honor that limitation?" (A) Have students brainstorm changing family economic situations that affect the type or quantity of food used; e.g., seasonal employment, pre-payday blues, windfalls, commission sale employment. (A) Have them identify (B) or list (I) examples of the above situations.
5. Lifestyle Choice Lifestyle choice, which is the result of family and individual values, influences eating patterns.	To evaluate the relationship between lifestyles and food choices.	Have students compare (I) and evaluate the food choices people in a variety of lifestyles might make; e.g., status seekers, gourmets, those practicing voluntary simplicity or vegetarians. Have them collect pictures which might depict these people; then have them match menus with the pictures. Explain or describe the results.

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students discuss the rationale for a vegetarian diet. (I) In what ways does this choice of lifestyle demonstrate values? (A) Have students prepare a table relating values to lifestyles and then to the foods which might be used. (A) LAB EXPERIENCE: Have students use vegetarian recipes to plan (B) and prepare (I) a meal using only fruit, vegetables, grains, milk, and eggs. Have them evaluate the results in terms of palatability, ease of preparation, availability of ingredients.
B. Science of Nutrition Nutrition is the science of food and their nutrients. These nutrients support health through the food each individual eats.		
1. Conversion of Food into Energy The energy value of food is measured in calories/ kilojoule.	To distinguish how the body converts food to energy through the processes of digestion and metabolism.	Have students define "calorie" and "kilojoule." (B) Have students describe "The Phenomenal Digestive Journey of a Peanut Butter Sandwich," or "How a Hamburger Turns Into You." (I)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
2. Basic Nutrients		
Knowledge of basic nutrients and their sources helps families to select food to meet body requirements: growth, repair, regulation, maintenance, reproduction, heat and energy.	To identify basic nutrients, their sources and their functions.	Pretest for nutrition knowledge by dividing students into small groups and having them list as many food facts and fallacies as possible. Have them work as a group to compare these to nutrition information that is factual. (B)
	To explain the purpose of the dietary standards.	Have students find the latest document on the recommended nutrient intake for Canadians and compare its contents with previous Canadian dietary standards. Explain the changes. (A)
. Water		
Water is essential for life because all body cells contain water and most are surrounded by a thin layer of water.	To determine the functions, sources and importance of water as well as the results of a deficiency.	Have students identify the numerous ways in which an individual may become dehydrated and comprehend that water deprivation kills faster than the lack of any other nutrients. (B) Have students read (I) or relate (B) a survival story that involves devising ingenious ways to get water; e.g., *Alive: The Story of the Andes Survivors*, or *Kon-Tiki Expedition*.
. Carbohydrates		
Carbohydrates make up the major component of most human diets (approximately 60%). They provide the body's most important source of energy.	To differentiate among the three types of carbohydrates: starches, sugars and dietary fibre.	Have students identify the differences in fiber, sugars and starches--chemically, by function, in digestion and in metabolism in the body. (I) Discuss why grain foods form the foundation of most diets all over the world. Include in discussion the fact that, in impoverished communities, 90% of the energy food provided

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		comes from carbohydrates, while in "rich" communities, the percentage is only 50%. (B)
		Have students identify (B) and analyze (A) the reasons for differences or exceptions (i.e., Northern Canada).
	To assess the importance of fibre in the diet.	Have students use comparison charts to determine the best sources of dietary fibre. (B)
		Have students review current research which indicates that certain diseases of our civilization are related to fibre deficiency. See section referring to Killer Diseases.
		LAB EXPERIENCE: Have students choose (I) and prepare (B) a recipe for a popular, high fibre food.
		LAB EXPERIENCE: Have students modify a recipe of a currently popular food to increase its contribution of fibre to diet. (A)
. **Fats**		
Fats are concentrated food materials that provide energy.	To identify the composition, functions and sources of fats.	Have students identify (B) or describe (I) the difference between saturated and unsaturated fats.
	To differentiate between animal and vegetable sources of fat.	Have students compare different margarines for the percentages of saturated and unsaturated fats used. (B)
		Have students visit supermarkets and/or analyze labels of foods to determine the type of fat used in whipped toppings or margarine. (I)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students discuss the statement, "The social requirements for fat for 'good living' are higher than the physiological requirements for good health." (A)
	To analyze current information about the role of fat intake on heart conditions.	Invite members from the Heart Foundation or a heart patient to discuss meal planning and to give further guidance on how to have a healthy heart. (B)
		Have students describe the relationship of cholesterol to heart disease. Consider that cholesterol consumption is highest in developed countries and has increased during the twentieth century, as has the incidence of heart disease. (I)
. Protein		
Proteins are made up of amino acids which are essential for building and repairing body tissues.	To describe the components of protein.	Have students identify (B) and/or discuss (I) protein according to the following:
	To describe the digestion and metabolism of protein.	. essential and non-essential amino acids . complete and incomplete protein
	To identify sources of protein.	Have students observe a school breakfast or lunch program and determine the foods that supply protein to the children. (B)
		Using 24-hour recall or weekly food intake record, students can determine the foods that supply protein. Have them identify complete and incomplete proteins. (B)
		Have students evaluate recall meals for nutrient density. (A)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Nutrient density is the amount of nutrients in relation to the number of calories in food. Foods that are high in protein, vitamins and minerals in relation to calories are nutrient dense.
	To describe the functions of protein and compile information on the effects of protein deficiencies on children and adults.	Have students identify: (B) . Variations in protein requirements: - during pregnancy or nursing - in childhood - during teens growth spurt - in adulthood . Deficiency effects on children, e.g., Kwashiorkor: - on growth size - on mental development . Deficiency effects on adults: - anemia - during injury or surgery when protein is broken down Have students research the above and do mini-reports. (A)
	To compare current high cost of animal protein with low-cost vegetable protein alternatives.	Have students do (B) or research (A) and do a cost comparison of animal and vegetable protein. Have them determine the protein quality and palatability of recipes without meat. See concept referring to Lifestyle Choice.

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		LAB EXPERIENCE: Have students prepare a meatless meal. (B) Refer to lab under Lifestyle Choice.
. Minerals Mineral elements are essential for building and repairing hard and soft tissue, for regulating fluids, for promoting oxidative processes and for normal functioning of nerves and muscles.	To identify sources of iron, calcium, phosphorus, iodine and fluorine.	Have students find some new ways to add milk to daily meals and snacks to increase calcium intake for someone who does not like to drink milk. (B)
	To identify the micro-nutrients that are considered essential to humans.	LAB EXPERIENCE: Have students prepare one of these meals. (B)
	To describe the functions of minerals in the body.	Invite a dentist to class or have students find other evidence to support the belief that fluoridated water supplies reduce the incidence of dental decay. (B)
		Have students put on a puppet play suitable for pre-schoolers to teach dental care. (B)
		Discuss why women, children and teenagers are more often deficient in calcium and iron than are men and boys. Have students plan to alleviate the problem. (B)
		Have students plan weekly menus which will provide a teenager with 800 mg (or the required amount) of calcium per day. These menus should also provide 8 mg (or required amount) of iron per day. (I)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		LAB EXPERIENCE: Have students prepare one of these meals and identify sources of calcium and iron. (B)
		Have students describe the relationship of calcium, phosphorous, and vitamin D to bone formation; i.e., rickets in children and osteomalacia in adults. (I)
. Vitamins		
Vitamins are organic compounds that promote growth, aid in reproduction and protect the body against disease and infection.	To compare characteristics of fat-soluble and water-soluble vitamins.	Have students discuss the body's ability to store fat- and water-soluable vitamins. (B)
Fat-Soluble Vitamins: . Vitamin A . Vitamin D . Vitamin E . Vitamin K Water-Soluble Vitamins: . Vitamin C . Vitamin B complex	To identify the functions, sources and deficiencies of vitamins.	Using pictures where possible, discuss deficiency diseases which result from lack of specific nutrients. Why are these uncommon in North America? (B) Discuss current information regarding effects of other substances on vitamin absorption and retention; e.g., alcohol and vitamin B, smoking and vitamin C. (A) See concept referring to Chemical Misuse.
	To analyze the need for and hazard of vitamin supplementation.	Have students report on the use of vitamin supplements. (B) Discuss why nutritionists often regard supplements as wasteful and unnecessary. (A) Have students identify groups in the population who are at risk of deficiency so that a supplement is recommended. (B)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		- pregnant and lactating women - infants - those on severe and restricted weight reduction programs - persons with malabsorption diseases - strict vegetarians - convalescents from injury or disease - women during reproductive years - elderly with poor diets Discuss some of the current theories regarding mega-vitamin therapy. (A) For example: - Vitamins can prevent birth defects. - Vitamin C can prevent and cure a cold. - Vitamin A cures acne and cancer. - Vitamin E is an elixer of youth. - Niacin cures schizophrenia. - Vitamin B or laetrile cures cancer. Have students research the hazards of such megadoses. (A)
3. Food Interchange and Interdependence of Nutrients		
Knowledge of nutrient equivalents and alternative food sources aids in substituting foods to maintain a balanced diet.	To recall "Canada's Food Guide" and its recommendations for daily intakes.	Pretest on knowledge of "Canada's Food Guide." (B) Have students evaluate given daily menus for adequacy according to "Canada's Food Guide." (I)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To *discover* that nutrients are often interdependent in their functioning.	Have students plan a breakfast which supplies iron simultaneously with Vitamin C. Have them evaluate the practice of enriching milk with Vitamin D. (I)
	To *practice* food exchange.	*LAB EXPERIENCE*: Have students plan (I) and/or prepare (B) a meal substituting vegetable protein for animal protein. Nutritional adequacy can be maintained by combining it with cereal, protein, eggs, cheese or milk. See concept referring to Lifestyle Choice.
		Have students discuss critically the importance of "Canada Food Guide" in maintaining a balanced diet. (A)
C. *EFFECTS OF FOOD CHOICES ON THE INDIVIDUAL--ESPECIALLY TEENAGERS*		
Food habits established during childhood and the teenage years continue into adulthood. Improving poor food habits early will improve the quality of present and later life.		See concepts referring to Individual Preferences, Early Childhood Needs and Adolescent Needs.
1. *Optimum Physical and Mental Health*		
Mental and physical well-being are interrelated.	To *define* fitness.	Invite physical education teachers to describe fitness programs. (B)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
Physical activity and fitness levels influence what and how you eat and, therefore, the results you get from the food experience (from "Health and Wellness," *Forum*).		Have students identify those programs that encourage healthy eating. (B) Have students form groups. Have each group visit a fitness program and report back to the class on the type, goals and emphasis of the program. Have them compare activities found in fitness programs. (A)
	To recognize physical conditions and mental attitudes related to improper food choices.	Have students take part in a fitness program to assess personal level of fitness. (B) Have students interview people on a regular fitness program. Determine how physical condition and mental attitude were improved through the program. (I) Have them discuss: "The results of a good fitness program can be destroyed by a poor diet." (A)
One's energy needs are related to sex, size, age, activity level and basal metabolism.	To determine one's ideal weight and energy requirements.	Have students use ideal height and weight charts, calipers to measure body fat, and formulas to determine whether one is ideal or less than ideal in weight. (B) Have students calculate personal energy requirements. (I)
	To evaluate one's own food choices.	Have students analyze a three-day food recall using a computer program. (I) Have them evaluate and prepare improved menus. (A)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		LAB EXPERIENCE: Have students prepare a lunch emphasizing low calories and high nutrients. (B)
		LAB EXPERIENCE: Have students prepare a lunch featuring a nutrient that has been shown to be marginal or inadequate in the diet analysis. (I)
	To analyze the relationship of food intake and personal needs.	Have students identify factors related to both BMR and activity levels which have to be taken into account to ensure a balanced diet in each of these cases: (B) . an elderly house bound man who has hot "Meals on Wheels" three times a week . a young female executive who "brown bags" her lunches
		Discuss factors that affect basal metabolism which varies with each individual: (A) . body composition . sex . body size . emotional state . age . thyroid secretions

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
2. Food Practices which Might Be Risk Factors For Canadians Although foods supplying the necessary nutrients are available in abundance, North Americans run the risk of being nutritionally deficient because of poor eating habits.		See concepts referring to Lifestyle Choices.
. Snacking and Meal Irregularity It is possible to make choices which balance the nutritional value of the foods you eat even when you rely on snacks as a portion of your nutrient needs.	To determine the dangers of snacking.	From a 24-hour or three-day food recall, have students establish the quantity and types of foods most often used for snacks. Have them determine whether the foods are high in fat or sugar; are nutritious or have empty-calories. (B) Have students discuss why snacking may lead to overweight, poor nutrition, and poor dental health. (B)
	To establish improved snacking habits.	Have students discuss ways to modify poor snacking habits. Have them include food choices and techniques to incorporate snacks into the daily nutritional requirements. (B)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
. Fast-Food Syndrome		
Food eaten away from home is a viable alternative to home prepared meals if nutritional balance is considered.	To distinguish between empty calorie foods, fast foods and nutritious foods.	Using "nutrient density" as a reference, have students define the following terms: (I) . empty calorie foods . fast foods . nutritious foods
		Have students compare the nutritional value of orange drink with added Vitamin C to orange juice. (I) Have them discuss critically the addition of Vitamin C to soft drinks. (A)
	To analyze the reasons for the popularity of fast-food establishments.	Have students conduct interviews with customers and the management of fast-food restaurants to discover the reasons for their popularity. (B) Have them identify restaurants that are: . inexpensive . satisfying . tasty . fast . convenient . friendly, sociable . appealing to children . prepared to offer variable portion sizes
	To evaluate the quality of the food served away from home sources.	Have students collect and study menus from several restaurants. Have them decide which ones: (B)

- contain all four food groups
- are low in sugar, fat, salt and high in fibre
- are appealing

Have students interview fast-food restaurant managers about the choice of foods served. (B)

- lack of fresh fruits and vegetables
- extreme use of fried foods

Have students survey vending machines and list what is available. (B) Have them evaluate the contents for nutrition. Have them identify and evaluate recent changes in fast foods and vending machine foods. (A)

Have students debate: "Fast foods may be a threat to health." Have them consider fat and sodium content, the source of the carbohydrates, nutritional deficiencies and the frequency of consumption. (I)

To recognize that foods chosen away from home contribute to the daily intake.

Have students list suggestions on how to make the best of fast-food cooking if it is to become a viable alternative to home cooking. Some possibilities: (B)

- small burger with the works
- milk instead of shake
- slaw or salad instead of fries
- unsweetened juice instead of soda
- include missing fruits, vegetables, etc., in other meals

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
• Fad Dieting and Diet Foods		
Many currently popular diets are nutritionally inadequate.	To analyze currently popular dieting techniques for adequacy in meeting basic nutritional requirements, using "Canada's Food Guide."	Have students collect information about weight-change programs from magazines, libraries, home, diet clinics, newspapers, etc., and identify techniques used to change weight. (B) Have them analyze each one in terms of its nutritional validity, effectiveness and safety. (A) 1. total fast 2. supplemented fast or modified fast; e.g., Cambridge Diet, Liquid Protein Diet 3. low carbohydrate; e.g., Scarsdale Diet, Banting Diet, Atkins Diet, Drinking Man's Diet, Mayo Diet, etc. 4. high carbohydrate; e.g., Beverly Hills Diet 5. high fibre; e.g., Pritikin Diet 6. starch blockers, popular in 1981 but withdrawn in 1982 by the Food and Drug Administration 7. balanced diets; e.g., Weight Watchers 8. behavior modification 9. acupuncture 10. special diet foods; e.g., "lean meats" 11. drugs; e.g., diuretics to remove water from the body, anoretics--appetite suppressants (produces a state of anorexia) 12. surgery; e.g., intestinal--remove part of intestine, gastric bypass or staple the stomach, jaw wiring, suction fat from adipose tissue

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To distinguish between the characteristics of a fad diet and a reputable diet program.	From the collection of fad diets, have students list the common characteristics which identify a particular diet as inadequate, such as: (B) . promises quick result--more than 2 lbs/week . has severe restrictions--less than 1000 calories/day . eliminates one or more major nutrients . requires nutrient supplements . does not mention exercise . cites claims of personal testimony only . does not mention modification and variety in eating . uses expensive or unusual foods Using reputable diets, have students identify the following characteristics: . has suitable caloric intake . has no severe restrictions . has all food groups represented . has some fat present if low calorie foods are emphasized . is of reasonable cost . is easily adapted to family and eating out . is easily adhered to for long periods of time . changes eating habits . emphasizes portion control
	To apply diet information to daily food intake.	Have students examine newspapers and magazines for pictures of foods whose energy value has been changed by preparation and serving. Have them list the ways calories/kilojoules are added to foods and also the ways they can be reduced in food preparation. (B)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students list foods that could be used to replace high calorie foods in a typical week's menus without reducing nutrients. (B)
		Have students identify cooking/preparation methods which reduce kilojoules without reducing nutrients. (B)
		LAB EXPERIENCE: Have students prepare a buffet of low-calorie foods. (B)
		LAB EXPERIENCE: Have students plan and prepare a low-calorie appetizing meal suitable for a teenager who wishes to lose weight. (I)
		LAB EXPERIENCE: Have students prepare potatoes by four different methods and compare the results for energy and nutrient value, and palatability. (I)
		Have students select a week of menus (including snacks) which would be typical of a teenager. Have them show how to subtract 900 kj (128 per day) without causing nutrient deficiency. (This would result in loss of .5 kg of weight per week.)
		Have students conduct a survey among family and friends to determine whether they have ever followed a fad diet and, if so, why and with what kind of results. Have students draw conclusions. (A)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
. Chemical Misuse Current information indicates that the use of certain chemicals may be hazardous to health.	To recognize that there are food and drug interactions.	Have students interview a pharmacist to find out what food and drug interactions might be considered; e.g., tetracycline and milk. (B)
	To assess the physical and nutritional risks of drug use and abuse.	Have students either visit the Alcohol Foundation of Manitoba or invite a speaker to outline the risks of high alcohol consumption, such as the occurrence of: (B) . fatty deposits in the liver as it metabolizes alcohol, resulting in cirrhosis . irritation of the stomach lining, resulting in gastritis . malnutrition as alcohol replaces food and interferes with the body's ability to digest, absorb and convert nutrients; also dissolving and washing away minerals . Fetal Alcohol Syndrome resulting from the consumption of alcohol during pregnancy, one cause of mental retardation Have students consider the use or abuse of caffeine. Have them list the foods which might contain caffeine; e.g., coffee, tea, soft drinks, cocoa, chocolate bars, over-the-counter medicines, such as cough syrups. (B) Have students trace the ingestion of caffeine throughout the life cycle: (B) . during gestation, caffeine reaches the fetus across the placenta and may cause birth defects

- after birth, caffeine reaches the nursing infant through the mother's breast milk
- during childhood, caffeine is consumed by the family in soft drinks, chocolate
- caffeine consumption gradually increases during teens and early adult years

Have students discuss the harmful effects of caffeine: (B)

- caffeinism (insomnia, nervousness, irritability, stomach disorder, diarrhea, disturbances in heart rate)
- mild addiction

Have students discuss alternatives to caffeine; i.e., decaffeinated coffee, carob instead of chocolate, artificial sweeteners. (I)

Have students read labels and list foods which contain aspartame or other artificial sweeteners. (B)

Have students prepare reports on artificial sweeteners such as cyclamates, saccharin and aspartame. Have them include such topics as: their discovery, removal or limitations on the market and their uses. (A)

Debate: "The use of artificial sweeteners should be banned completely." (A)

Have students research causes for concern in use of non-prescription drugs during pregnancy. (A)

Debate: "Liquor should be enriched." (A)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students research further relationships of drugs to disease; e.g., heart disease, peptic ulcers.
3. Common Canadian Nutritional Problems Canadian teenagers are faced with health risks resulting from lifestyle and improper diets. . Energy Imbalance		See concepts referring to Lifestyle Choice.
As a result of energy imbalance, the incidence of overweight and underweight problems is increasing.	To distinguish between ideal weight, overweight, and obesity.	Have students examine height-weight charts to determine their own ideal weight range. (B) Have them discuss limitations of the standardized chart. (I) Instruct students to do a three-day food consumption and energy expenditure recall and, using a computer, analyze calorie intake and energy output. (A) See also concepts referring to Optimum Physical and Mental Health.
	To identify causes of obesity.	Arrange to have students visit an obesity control clinic or a dietician. Have them discuss why some people are more likely to become obese than others. (B) Factors to be considered include: . heredity--(90% of obese children have a family history of obesity) . hormonal imbalance--(overactive hypothalamus gland) . psychological disorder--(a psychological disturbance could induce a hormonal imbalance or alter eating patterns)

- socio-economic lifestyle--(some cultural or social groups exert pressure to eat)
- lack of exercise

Have students discuss the body's potential to accumulate too many fat cells during the three most critical phases of growth: (A)

- last three months of fetal development
- first three years of life
- adolescence

Have students make a list (B) or make a generalization (A) about reasons for the tendency of some teenagers to become obese--considering exercise; eating patterns; types of snack foods, likes and dislikes, availability; and peer influence.

To identify the dangers of obesity.

Have students research the dangers of obesity, (B) noting the relationship of obesity to killer diseases: (A)

- reduced life expectancy (a 45-year-old man of ideal weight will live 25% longer than one who is 10 kg overweight)
- coronary heart disease,
- pregnancy complications (toxemia, difficult deliveries)
- miscellaneous health disorders:
  - varicose veins
  - kidney disease
  - diabetes
  - respiratory problems
  - high blood pressure
  - limited physical mobility
  - abdominal hernias
- psychological distress

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To plan methods of treating obesity.	Have students outline a complete weight loss scheme for someone who is obese, considering diet, exercise, the possible use of drugs for severe cases, and behavior modification. (A)
	To recognize disadvantages of being underweight.	Use case studies to illustrate or arrange students in groups to brainstorm the disadvantages of being underweight: (I) . social disadvantages, . associated health problems; e.g., delayed menstruation and lowered fertility rate
	To identify the characteristics of anorexia nervosa.	Using pictures of modern models and sixteenth century paintings, have students compare the fluctuating standards of ideal body weight and discuss: "Anorexia nervosa and bulimia are signs of the times." (B) Using case studies, have students identify the patterns which are danger signals for anorexia nervosa (as compared to general underweight). (I) . distorted body image . obsession with losing weight . emaciation . disruption of menstrual cycle . growth of a fine coat of hair all over body (sign of hormonal imbalance) . self-induced vomiting or the use of laxatives or diuretics . preoccupation with food while only picking at it

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		• unusual eating behavior such as chopping food into tiny pieces or refusing to let food touch lips • severe exercise • compulsive calorie counting
	To recognize that anorexia nervosa is a pyschological disorder.	Invite a resource person to class to discuss treatment of anorexia nervosa and bulimia. (B)
• Nutritional Imbalance		
Deficiencies in iron and calcium are common in Canada.	To recognize the causes of iron deficiency in specific segments of the population.	Have students list (B) and analyze (A) the different circumstances in which each of the following groups of people might become anemic: • newborns--nutrient deficiencies in nursing • toddlers--excessive consumption of "iron poor" milk • school-age children--dislike of green vegetables • teenagers--limited diet lacking required nutrients • adults and teenagers--excessive reliance on alcohol; insufficient attention to nutritional needs; e.g., female needs for iron and calcium • the elderly--reduction in overall food intake and inadequate attention to dietary needs • vegetarians--lack of red meat or suitable protein supplement LAB EXPERIENCE: Have students prepare a buffet of foods rich in iron. (B)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To recognize that prevention of osteoporosis resulting from calcium deficiencies is a life-long concern.	Describe osteoporosis. Have students discuss: "Avoidance of osteoporosis begins at birth and does not cease once growth stops." (I) LAB EXPERIENCE: Have students plan (I) and prepare (B) a lab identifying hidden sources of calcium for individuals who dislike milk dairy products. See concept referring to Minerals.
. **Particular Concerns for Native Canadians** Manitoba's large Native and Inuit population has its own unique nutritional problems.	To recognize food problems experienced by Native people.	Invite a speaker from Native Studies to explain problems related to Native nutrition. (B). Have students state (B) or research (A) reasons for these problems affecting Native people in both rural and urban settings: . cost of food incommensurate with income levels . loss of traditional food sources and skills . traditional eating patterns . lack of fresh fruits and vegetables

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
D. DEVELOPMENT OF SKILLS IN CREATING WELL-BALANCED MEALS		
1. Low-Calorie Foods		
A balanced intake of nutrients is essential even if a calorie reduction is needed.	To plan a balanced low-calorie diet, using "Canada's Food Guide" recommendations, and applying principles of good nutrition and other elements of good meal planning.	Have students adapt a family menu to reduce calories for one family member using as many of the same foods as possible. See concept referring to applying diet information.
2. Dishes High in Particular Nutrients		
An aesthetically appealing meal is important even when meals are planned for particular nutritional needs.	To plan diets high in particular nutrients, thus meeting specific needs of individuals.	See concepts referring to carbohydrates, minerals and optimum physical and mental health. Have students plan (I) and prepare (B) meals that are high in specific nutrients, maintaining the aesthetic appeal required in a "good" meal.
3. Planning Well-Balanced Meals		
"Canada Food Guide" is a good base for planning well-balanced meals.	To apply nutritional knowledge in the planning and preparation of meals which will meet the needs of the family.	Have students identify the special nutritional needs of specific family members; e.g., mother, father, toddler, athlete, dieting female, adolescent male, grandparents. (B) LAB EXPERIENCE: Have students plan (I) and prepare (B) a meal for a specific family member.

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students plan a week's menu for a selected family member, taking care to include the four food groups and to consider special dietary needs such as iron, calcium, low calorie, high energy, soft texture, etc. Other elements of good meal planning are to be applied as well. (I)
		LAB EXPERIENCE: Have students prepare one meal from the suggested menu that could be eaten by any member of the family. (B)

II. MAJOR CONCEPT: Consumer Aspects of Food and Nutrition

MAJOR OBJECTIVE: To evaluate and apply consumer information and resources

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
A. CONSUMER DECISION MAKING Making responsible decisions regarding food needs involves the application of decision-making framework, processes and strategies.		
1. Decision-Making Process Knowledge and use of a decision-making process encourages the rational assessment of values, goals and standards in choosing among alternatives.	To identify the decision-making process leading to a plan of action.	Using case studies as examples, have students gradually identify the six steps in the decision-making process: (B) 1. State the problem. 2. List possible alternatives. 3. Consider alternatives and their consequences. 4. Weigh values, needs, resources. 5. Make the decision, and act upon it. 6. Evaluate the choice.
	To apply the components of the decision-making process.	Using the process as a guideline and taking into consideration personal values, goals and standards, have students analyze the following situations: (B) . Many of your friends are giving up meat and other animal products and becoming vegetarians. Should you adopt this lifestyle also?

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. You recently realized that your diet was excessively high in fat and that you were becoming increasingly overweight. You think you should lower your fat intake and your weight. How can you do it?
	To apply the decision-making process in the selection of food marketed in various forms.	LAB EXPERIENCE: Have students examine and compare a number of different foods in the forms in which they are marketed. Identify the form, the preservation technique employed, the usefulness to the consumer and the palatability of each form (fresh, canned, frozen, dehydrated, dried, prepared and partially prepared, fabricated foods, freeze dried, irradiated). (B) Assign each student to a group, designating a given amount of money to each group, along with an imaginary shopping cart to be filled. Have students make food choices for a variety of people (teenager, father, mother, grandmother, etc.), discussing the values, goals and standards reflected in these choices. (I)
B. HUMAN NEEDS Although human physical needs are universal, the allocation of resources to meet these needs varies.		

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
1. Meeting Human Needs		
Family food needs are determined by biological requirements and sociological factors.	To identify biological requirements for food.	Using the four food groups as a guide, have students complete a week's grocery list for themselves based on "Canada's Food Guide." Have them explain why the list meets their biological needs. (A) See concepts referring to planning well-balanced meals.
C. MANAGEMENT OF RESOURCES		
Consumers meet their basic food requirements through the use of financial, human and environmental resources.		
1. Financial Resources		
The size of family income only partially determines the amount of money spent on food.	To explain sources of income.	Have students identify personal sources of income by referring to an Income Tax Guide. (B) Have them list ways in which income can be augmented by sharing and increasing other resources; e.g., gardening, fishing, hunting. (A)
	To explain that the size of one's income influences the proportion spent on food.	Have students prepare a grab bag containing a variety of items representing needs affecting a family's total expenditures. Have them select a set income and develop a family food budget, altering it as decisions are made about withdrawing other items from the grab bag. (I)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students list and price all the staples needed to stock their first kitchen. What is the cost? (I)
		Have students plan a week's menu for themselves and price the food order. (I) If the weekly food order equals 18-23% of one's expendable income, what must be the income?
		LAB EXPERIENCE: The housekeeping money is rather scarce and some foods need to be used up. They are cheese, bread, egg yolks, and some canned fruit. Have students plan a menu (I) and use (S) these foods along with basic ingredients normally in a storage cupboard to produce a meal.
		A Canadian banking institution suggests that 18 to 23 percent of an average expendable income be used for food. Have students use this information to develop a chart for food expenditures for one week for a given family, indicating the amount allocated for each food group. (A)
		Have students describe changes in the above chart with an income increase and/or decrease of $300. (A)
2. Time and Energy		
The manner in which time and energy resources are used in meeting food needs will depend on individual priorities.	To analyze the amount of time as well as mental and physical energy used in meeting food requirements.	Have students interview people in a variety of lifestyles, generalizing about the amount of time and energy expended on meeting food needs. (A)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To analyze food planning and preparation activities.	Have students describe the problems which might arise if resources for preparing meals were not planned. Resources to be considered include the menu, time, skills, help from others, ingredients and equipment. (I) LAB EXPERIENCE: Have students work in pairs to complete a time and motion study of the preparation of a meal or of a single recipe, with one student preparing the food and one recording movements. (I)
	To develop ways in which money can be conserved by the judicious use of time and energy.	LAB EXPERIENCE: Devising time and workplaces for all labs, have students compare the results of planning (I) and preparing (B) meals or recipes using resources in the following ways: . using time to save money--prepare homemade dishes (soups, breads, quick breads, dried legumes etc.) . saving time and energy--prepare recipes using energy-saving devices (microwave oven, blender, small appliances, convenience foods, etc.) . managing time--plan ahead by using time management deices and strategies (slow cooker, automatic oven, freeze-dried dishes, etc.)
3. Creative Ability Creativity in the production, preservation and preparation of foods can extend the purchasing power of money available for food supplies.	To develop creative ways to produce and prepare food products.	Case Study Jeff made plans to have hot dogs* for dinner. Suddenly, old friends drop by for a visit and now he must serve dinner to them. Because he would like to make a favorable impression on

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		them, he must make some additions, modifications and decorations to make it look and taste as attractive as possible. What is he to do? (B)
		*Use a food suitable for students in the classroom.
	To appraise creatively prepared foods by comparing them with commercial food products.	LAB EXPERIENCE: Have students prepare a variety of foods produced commercially (muffins, pizzas, lasagna, sauces, snacks, dressings, cookies, etc.). Have them compare the results with commercial products. (I)
4. Natural Resources		
Commercial foods are only one source of readily available food.	To identify and evaluate foods which are edible natural resources.	Have students do research on edible and inedible wild plants. (A)
		LAB EXPERIENCE: Have students take a nature walk to collect and later prepare edible natural foods. (A)
	To plan strategies for outdoor survival.	Have students visit a local library or museum to collect information pertaining to the way of life of early Canadian settlers or Indians. (I) placing particular emphasis on their food habits. Have them discuss how and from where they obtained their food and how it was prepared for consumption. (A)
		LAB EXPERIENCE: Have students prepare a meal with wild game and bannock. (B)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		LAB EXPERIENCE: Have students plan a cookout for a time when weather is appropriate. (B)
	To develop plans for home gardening and landscaping.	Arrange a class field trip to the University of Manitoba Experimental Farm and/or local greenhouses and farms. (B) Have students discuss the possibility of growing edible plants in the home and at school; e.g., indoor herb gardens, balcony and window-box gardens, hydroponic gardens or ornamental fruit trees. (I)
5. Community Resources		
The purchasing power of money that is available for food can be extended if economical sources of food supplies are identified and utilized.	To evaluate community food sources and available foods.	Have students evaluate advantages and disadvantages of shopping at supermarkets, convenience stores and corner stores by completing a food outlet comparison. Have them consider services, cleanliness and organization, variety and quality of food, location, etc. The report should include a price comparison chart. (B)
	To recognize that special food outlets offer interesting foods.	Organize a field trip to build awareness of specialty food outlets (e.g., variety shops, ethnic stores, natural food stores, market gardens).
D. CONSUMER MOTIVATION RELATED TO MARKETING PRACTICES Consumers are affected in both rational and emotional ways by marketing practices.		

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
1. Consumer Behavior		
Consumers develop behavior consistent with their peer groups, income levels, community resources and value systems.	To analyze shopping behavior in consumers.	Have students develop a questionnaire and research people's food buying habits. (I) Have them analyze the results for priorities: . convenience of store location . taste preference . aesthetics of the environment . fidelity to store or brand . ease of preparation and saving of time . prices . reliability . services offered
2. Advertising		
Advertising is designed specifically to appeal rationally and emotionally to particular groups of consumers.	To determine the nature, function, forms and effects of advertising.	Invite a resource person from an advertising firm or the advertising department of a supermarket to describe advertising techniques. (B) Have students collect examples of food advertisements from the media (e.g., tv, radio, newspapers and magazines), analyzing each ad in terms of: (B) . claims . target group . catchy slogans . misleading information or suggestions . useful information
	To appraise the ethics and controls of advertising methods used in the food industry.	Have students collect examples of advertisements they believe are misleading or contain questionable information and discuss what should be done about this. (B)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Review the "Canadian Code on Advertising Standards" and have students discuss how the code protects the consumer. (I)
		Instruct students to watch for food advertisements during prime time, day time and special children's hours, keeping a record of what is advertised and how often. What is distinctive about the particular advertisements during specific viewing times? (A)
3. Packaging		
Good packaging protects the contents from contamination and deterioriation, provides complete and accurate descriptive labeling and is well-designed for storage and use.	To list the information required on the packaging of food products.	In groups (B) or independently (I) have students research some package information; (e.g., nutritional value, labelling, shelf life dates, unit pricing, universal product code, ingredient and additive listing).
	To analyze the suitability and cost of packaging materials and their effect on the environment.	Have students identify and describe the use of different soft drink packaging materials, and compare the environmental effects of refundable and disposable products. (B)
	To evaluate the design qualities of certain packages.	Have students display packages that illustrate good design. (A)
4. Media and Sales Promotion		
Advertising and motivational experts develop strategies and techniques that have a subliminal manipulative effect on the consumer.	To analyze various forms of sales promotion.	Have students describe their experiences of various sales-promotion techniques. (A)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		LAB EXPERIENCE: Divide the class into groups and have each group create a new snack food, package and label it, identify a target group and promote the product. Have a class appraise the results to select the best product and most successful promotion. (A)
E. CONSUMER PROTECTION To ensure that food products are safe for human consumption, responsible consumer action must supplement government control of production, distribution and sale of food.		
1. Legislation Different levels of government have legislative jurisdiction over the activities of the food industry.	To compile information about legislation related to the food industry.	Do a pretest on student awareness of consumer legislation. (I) In researching current legislation protecting food products, have students consult the following: (A) . Consumer Packaging Act . Labelling Act . Food and Drug Act - use of additives - safe levels of pesticide residue . Combines Investigation Act on advertising

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Organize a student debate on the following: (A) . Consumers are being deceived. . Food products are as good as the advertisement's claim. . The Canadian government has adequate control over food products, such as the use of additives. . All foods suspected of being carcinogens should be removed from the market.
	To interpret effects of legislation on the food industry.	Have students research food marketing and storage regulations by interviewing the manager of a food store or restaurant or someone involved in the processing or retailing of food. Students should be sure to inquire about the interviewee's knowledge of applicable governing legislation, the penalties imposed if they are not adhered to, and the methods used to ensure that they are being met. (A)
2. Consumer Agencies Various government agencies regulate activities of the food industry with the aid of other private agencies.	To identify government and private consumer protection agencies.	Have students identify local and federal consumer protection agencies and describe their specific functions. (B)
	To appraise the role of government agencies in controlling activities of the food industry.	Have students read case studies and present consumer problems to be resolved by consulting with an appropriate "agency." Have them choose the agency or method of resolution. (B)

SUBCONCEPTS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To evaluate the role of consumer protection agencies.	Have students develop a current newspaper clipping file of consumer issues attended to by protection agencies. (A)
3. Consumer Responsibility To ensure effective consumer protection, individuals must take an active role in consumer issues.	To develop strategies for resolving consumer problems related to food products.	Have students discuss critical current consumer issues and evaluate personal consumer responsibility. (A) Case Studies Present case studies of breaches of the law; e.g., changing shelf-life dates, failing to identify pre-frozen meat on the label. Have students evaluate possible consumer action. (A) In establishing a "Consumer's Code of Ethics in Food Shopping," have students include specific consumer behavior that is required if consumers are to be fair to other customers, store personnel and store management. (A) Have students debate whether the following is an example of active consumer responsibility: The use of pesticides and additives is out of our hands. The time has come for consumers to rise and bring an immediate halt to this desecration of our bodies and our earth. (A)

III. MAJOR CONCEPT: Family Aspects of Food and Health

MAJOR OBJECTIVES: To appraise family food practices on the basis of individual needs
To apply knowledge and an aesthetic understanding of meal preparation to enrich the quality of life

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
A. FAMILY COMPOSITION AND SIZE (Family Life Stages) The composition and life stages of the family affect its food needs.		
1. Establishment Phase		
Two sets of food traditions and eating habits come together to create a new pattern within the lifestyle of a newly married couple.	To recognize the importance of consciously melding traditions in creating a couple's own lifestyle.	Have students draw some conclusions about the dilemmas of beginning a new household. (B) LAB EXPERIENCE: In pairs, have students plan a week's menu for a newly married couple. (I)
2. Expanding Family		
Eating habits must be adopted to meet nutritional needs during pregnancy and lactation, as well as in various stages of infancy and childhood.	To evaluate menus of expanding families.	Have students plan (B) or evaluate (A) diets to meet the needs of pregnant women and lactating mothers.
	To identify nutritional needs of children in various stages of infancy.	Have students research the latest findings on baby food considering cost, nutritional value, safety, additives and the advantages/disadvantages of homemade baby food. (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To appraise methods of developing good eating habits in preschool children.	Have students plan interesting eating experiences for children by selecting and preparing nutritious foods that are fun to eat and that could be served in a variety of situations (e.g., children's parties, picnics, school lunch boxes, after school snacks, camp-outs). (B)
3. Crowded Years		
School-aged children require help in making good food choices and keeping good eating habits. It is increasingly difficult to maintain good eating habits because of complicated family schedules.	To teach school-aged children basic facts about meeting their own food needs.	Have students dramatize the role parents and family members play when a new food is introduced to a young child. (I)
	To analyze and solve management problems that complicated schedules may impose upon the person preparing meals.	Have students plan and conduct a nutrition education program suitable for the full age range of a family. (A)
4. Families with Teenagers		
Teenagers need to recognize and practice meeting their nutritional requirements by assisting with meal preparation or supplementing meals with well-chosen snacks.	To plan and prepare meals suitable for a family with adolescents.	LAB EXPERIENCE: Have students prepare a food that can be made a day ahead and reheated as needed. (B) Have students list foods popular with teenagers that can be prepared in such a way that nutritional requirements are met. (B) Have students discuss the problems faced by parents who wish to ensure that their teenagers maintain an adequate diet. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
5. Launching Years		
The diminished household, accompanied by the reduced caloric needs of middle aged persons, requires a new approach to meal planning in many families. Decreased demands on both income and time offer opportunities for new food experiences.	To recognize the need to change food planning, buying and preparation techniques.	Have students list changes in buying patterns and meal preparation that might occur at this stage. (B) To discover changes in food purchasing adjustments at this stage, have students interview a family where numbers are diminishing due to the departure of younger family members. (I)
	To discover some of the unique food experiences the community offers to the middle aged.	Have students investigate new and unique food products or eating establishments in the community that would be appealing to this age group. (B) Have students attend community or church ethnic dinners or festivals to experience new foods. (B)
6. Aging Years		
Reduced activity, lack of energy, change in body functions and reduced income add new dimensions to the challenge of meeting food needs.	To analyze the particular physical and environmental changes experienced by the elderly.	Have students interview aging grandparents about the foods they like and dislike and foods they can or cannot eat. What are the reasons for these difficulties or preferences? (B) Arrange to have students visit a senior citizen's home to determine the difficulties associated with feeding the elderly. (I)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
B. SPECIAL NUTRITIONAL NEEDS Choosing nutritional food based on the specific needs of various stages of the life cycle is necessary for normal, healthy growth and development.		
1. Needs during Pregnancy During pregnancy, the welfare of the developing fetus and of the mother depends on the health and nutritional well-being of the mother.	To describe the process by which food ingested during pregnancy provides nourishment for both the mother and the fetus.	Have students discuss the nutritional and digestive problems of pregnancy; e.g., nausea, cravings and constipation. (B) Have students research the following: (B) . the process whereby the fetus is nourished . the recommended weight gain during pregnancy . the recommended nutritional intake during pregnancy . the additional nutritional needs of a woman during pregnancy
	To describe the effects of poor maternal nutrition on the baby and mother.	Have students identify the risks of inadequate or excessive nourishment during pregnancy. (B) Have students research (A) and/or discuss (B) the effects of drugs, alcohol, smoking, caffeine, and saccharin on the fetus.

To identify women who would be at high risk during pregnancy due to their nutritional status.

Have students describe and compare the symptoms resulting from a deficiency in each of the following: (B)

- protein
- calcium
- iron

In discussing why teenagers are at a greater risk than mature women during pregnancy, have students consider the following: (B)

- Teenagers frequently have poor diets and, when pregnant, they must compensate for the nutritional deficiencies of their own growing bodies, as well as the needs of the growing fetus.
- The teenage body is physically unequipped to carry a fetus, and therefore is at a greater risk of complications during pregnancy.
- Incidence of anemia, toxemia, premature deliveries, caesarian section, low birth weights and mental retardation is higher with teenage pregnancies than with adult pregnancies.
- Infant illness is more common in the offspring of teenagers than of mature women.
- Teenage pregnancies result in a higher infant and maternal mortality rate than adult pregnancies.

Have students discuss how each of the following factors might affect the nutritional status of a woman: (I)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. age (adolescence) . income level . recent pregnancy . diabetes, anemia, drug and alcohol abuse . depression . lifestyle stress; e.g., career . weight reduction fads
	To design strategies to ensure that pregnant teenagers meet their nutritional needs.	Have students plan menus to meet the needs of pregnant teenagers, including foods which are dense in proteins, vitamins and minerals. (B) Arrange to have students visit a help centre for pregnant teenagers to discuss the emotional problems associated with unwanted pregnancy. Explain that such problems affect nutritional status, thus increasing risks during pregnancy; e.g., teenagers may deny the pregnancy to themselves and others by eating as little as possible to keep weight down. (I) Have students plan menus for an anemic pregnant teenager needing 20 mg of iron each day, evaluating these menus for: (A) . acceptability to teenagers . nutritional adequacy
	To evaluate the benefits of preventive nutritional programs and good life-long dietary habits.	Invite the area Public Health Nurse who is conducting pre-natal clinics to class to discuss the nature and purpose of courses offered as well as statistics about participation. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		LAB EXPERIENCE: Have students prepare a lunch for women in the later stages of pregnancy, considering extra protein, calcium and iron needs, and weight control. (B)
2. Infant Needs		
Infancy is a time of intense growth and development.	To identify the three stages of infant feeding: the nursing period, the transitional period, the modified adult period (from Nutrition and Health).	Invite young mothers to class or have students conduct interviews to discuss feeding of infants. La Leche League may provide promotional material on breast feeding. (B) Have students discuss the effects of a poor maternal diet during lactation, including the following: (B) . mothers more likely to suffer than the child . quality of milk generally unaffected . quantity of milk reduced Have students research infant feeding trends and concerns. (A) Supervise a student debate on the benefits and disadvantages of breast and bottle feeding. (A)
3. Early Childhood Needs		
Body building and body protective nutrients are equally important during the rapid growth period of early childhood.	To examine the nutrient needs in early childhood.	Review "Canada's Food Guide." (B)
	To recognize the need to provide children with nutrition education.	Have students design a poster, mobile, game or display that gives children information about nutrition and their food needs. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Arrange a class visit to a nursery school, kindergarten or day-care centre, asking staff to discuss the feeding program; i.e., what is eaten, whether or not there is any consideration for likes and dislikes, whether or not any nutritional education is involved? (I) Have students plan and present a lesson for a kindergarten class based on the four food groups. (A)
Preparation and service of food affects its acceptability to children.	To recognize the qualities of food that appeal to children.	LAB EXPERIENCE: Have students plan (A) and prepare (B) a nutritious and "fun" meal for a pre-schooler or a school-aged child. Have students list a variety of ways in which foods can be made appealing to small children. (I) Influencing factors include: • portion size • color • ease of handling and chewing • texture • temperature • familiarity • mixture/separateness of items
4. Adolescent Needs		
Energy demands and body-building nutrient requirements are greatest during the adolescent growth years.	To evaluate the daily nutritional requirements of adolescents.	Have students evaluate a "typical" adolescent daily, dietary intake, using "Canada's Food Guide" and nutritional principles related to adolescent needs. (I)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students participate in a critical discussion on the contribution of diet to good health, attractive appearance, adequate energy store and preparation for possible childbirth. (A)
Dietary habits established during adolescence set the stage for later life. This is also the time to nourish the body for later life.	To judge one's own eating habits.	In an effort to determine the availability and possible effects of food choices in the school, have the class conduct a survey of students concerning their food intake between 9:00 a.m. and 4:00 p.m. on two consecutive days. Have them draw conclusions. (I)
	To practice adapting family meals to irregular schedules.	LAB EXPERIENCE: Given a specific menu, have students adapt it to meet the needs of an active family. (I)
		LAB EXPERIENCE: Have students plan and prepare a meal for a family with four adolescents who participate in extra-curricular activities and, therefore, eat at odd hours. (A)
5. Needs of the Middle Aged		
While men and women need the same nutrients, their daily requirements are derived from different amounts of foods.	To compare the nutritional needs of men and women. To predict why some adults fail to meet their recommended daily intakes.	Discuss the relationship of eating patterns and: (A) . differences in body size and composition between men and women . incidence of heart disease amongst men and women . incidence of obesity, along with level of awareness of body weight . incidence of anemia and osteoporosis, particularly in women

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		• menstruation and menopause • oral contraceptives and hormonal treatment • alcohol consumption
	To plan appropriate food selections.	Have students consider the impact of these differences on food selection when: (A) • eating out • eating with the family at home • choosing snacks
During the middle years, the most critical role of nutrition may be the prevention of disease.	To recognize that men and women must learn to prepare for the physiological and socio-economic changes associated with later years.	Have students identify the physiological changes which occur during the middle years, e.g., reduction in basal metabolic rate (BMR) and activity level. (A) Have students discuss how one can prepare for the difficulties associated with aging. (A) LAB EXPERIENCE: Have students prepare interesting dishes which would be useful and appealing for different problems. (B)
6. Needs of the Elderly		
Physiological changes and a decrease in daily activities affect the nutritional requirements of the elderly.	To recognize changes in food and energy needs for the aged.	When interviewing senior citizens to identify alterations in dietary habits, have students determine if the alterations were due to a change in health, lifestyle, income or living space. (A)
Because of an increasing susceptibility to disease, it is especially important for older people to keep well nourished.	To discuss the nutritional and eating problems of the elderly.	Have students discuss dietary problems such as: (I)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. obesity resulting from failure to adjust intake to correspond with lower BMR and energy levels . underweight due to reduced caloric intake . anemia due to decreased overall nutrient intake . osteoporosis due to lifelong low calcium levels, affecting the ability to chew certain foods . diminished senses, accompanied by decreased enjoyment of food . impaired digestion/utilization of certain nutrients due to intake of certain medicines . intestinal disorders caused by certain foods . inefficient nutrient absorption by organs . constipation, aggravated by inability to eat fibre-rich foods . problematic acquisition of food due to limited income and mobility
	To examine ways to improve the nutritional status of the elderly.	LAB EXPERIENCE: Invite a group of senior citizens to a luncheon, offering foods suitable for the aged. (B) Have students investigate programs designed to alleviate some of the problems of the elderly; e.g., Meals on Wheels. (A) LAB EXPERIENCE: Have students plan a meal suitable for an elderly person who lives alone and cooks on a hotplate. (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
7. Needs of Athletes		
Athletes have the same basic nutritional needs as non-athletes but have greater energy requirements.	To evaluate special eating patterns of athletes in training.	Ask an athlete to describe how "carbohydrate loading" works. Describe the advantages and disadvantages. (I) Examine several meal patterns for athletes in training with special nutritional needs at times of stress; e.g., carbohydrate loading.
	To plan a pre-game meal.	LAB EXPERIENCE: Have students prepare a suitable pre-game meal. (B) Using reliable guidelines, have students plan a meal for an athlete to be eaten three hours prior to a strenuous athletic activity. (A)
8. Medically Prescribed Diets		
The planning and preparation of meals for a patient on a special diet or medically prescribed diet requires an understanding of the individual's physical condition as well as the composition of many foods, the principles of good nutrition and methods of preparing attractive meals.	To identify common medical conditions which require special diets. To distinguish between various principles involved in planning special diets.	Invite a dietician from a local clinic to discuss or have students interview a dietician and prepare a class report on the following conditions: (A) . Diabetes and insulin reaction. Identify principles involved in planning a diet for a diabetic person, and explain the relationship of diet to activity levels. . Blood Serum Cholesterol. Discuss the effect of high serum cholesterol and identify sources/causes of blood cholesterol. . Conditions requiring sodium restricted diets, and those affected by allergies, food sensitivities and cancer. Indicate foods recommended and foods to be avoided. Describe symptoms of improper diet.

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To examine and apply exchange systems.	Using an exchange system, have students plan meals based on a prescribed diet for a special medical condition such as diabetes, high cholesterol, heart disorders, allergies, etc. Have students demonstrate how exchange systems can also be applied to families desiring to reduce weight and fat or sugar intake. (A) LAB EXPERIENCE: Have students plan (A) and prepare (B) a low cholesterol meal. LAB EXPERIENCE: Using exchanges, have students plan and prepare a family meal that is low in calories, identifying where the exchanges have been made. (A) LAB EXPERIENCE: Have students prepare foods for diabetics using a sugar substitute. (A) LAB EXPERIENCE: Have students plan and prepare a meal for a family where one child is allergic to eggs. (I)
C. CHOICE OF LIFESTYLE Food habits are related to family lifestyles and the activities of individual members.		

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
1. Meals for Special Situations		
Certain physical and environmental conditions, as well as social occasions, require special considerations in meal planning and service.	To prepare meals for outdoor eating.	FIELD TRIP AND LAB EXPERIENCE: Have students plan (A) and prepare (B) an outdoor cooking and eating experience. Assign research on the topic of edible wild foods. (A)
	To examine ways which will enable the handicapped person to meet individual food needs with maximum efficiency and minimum strain.	Invite a speaker such as an occupational therapist to discuss eating and food preparation difficulties of those with handicaps, or organize a field trip to the Rehab Hospital to see the "practice" kitchen. (B) LAB EXPERIENCE: Have students participate in a simulation experience by imagining they are handicapped and preparing lunch in their kitchen; e.g., in a wheelchair with arthritic hands. (A) Have students evaluate new appliances, considering time, energy and cost advantages of each (e.g., yoghurt maker, ice-cream maker, peanut butter maker, crepe pan, slow cooker). Have them identify ways they can be useful for specific needs. (A)
	To discover what makes parties and entertaining successful.	Have students survey friends and family to find out how they feel about parties and entertaining, questioning them on their activity preferences, their objections and their definitions of a successful party. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To recognize that planning is involved in entertaining.	Have students list all the activities associated with entertaining: (B) . formulating guest list and writing invitations . planning menu . determining theme and activities: - dancing - games - slides - make it yourself . preparing decorations, tablecloths, napkins, serving utensils . choosing style of service--informal buffet or formal service . defining role of host or hostess . determining budget . cleaning up before and after
	To practice planning a party.	LAB EXPERIENCE: Have students prepare a party meal with a theme. (B) Have students plan a party taking into consideration the necessary activities, and using a theme of their own choice or any of the following suggestions: (A) . regional or ethnic: - Mexican fiesta - Scandinavian sandwich spread - Ukrainian feast . after-ski party . birthday party . children's party . picnic . Hallowe'en party . formal dinner . informal family Christmas or birthday dinner

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
2. Activity Level		
Family activity schedules as well as different activity or energy levels must be taken into consideration when planning family meals.	To recognize daily nutrient requirements.	Have students review daily nutrient requirements and "Canada's Food Guide" recommendations. (B)
	To recognize the effects of different kinds of work and leisure activities and schedules on family meal patterns.	LAB EXPERIENCE: Have students plan (A), prepare (B) and evaluate (A) one of the following meals: . a meal that can be prepared in thirty minutes . a meal that can be adapted for reheating . a meal that is adaptable to family members who are both active and inactive, thus requiring different caloric levels
	To plan meals for a variety of household situations.	Using case studies, have students participate in problem-solving situations by planning meals to meet the needs of particular families. Use case studies. (A)
3. "Use" of Food		
Values and attitudes directly influence what individuals perceive as the function of food.	To analyze ways people express their values through food patterns.	To help students recognize eating patterns, explain the six classifications of eaters in affluent parts of North America (as outlined in "Health and Wellness," Forum, March 1984: (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		1. "Survivors"--eat to stay alive, viewing food as a low priority 2. "Vaudevillers"--see and experience food as entertainment 3. "Disease Avoiders"--worry a lot about food and are obsessed with "scare" research 4. "Fat Fighters"--love to be entertained by food, but food is associated with guilt, shame and pounds 5. "Food Faddists"--worry and get angry about food and only shop in health food stores 6. "Health Enhancers"--eat to ensure optimum health, enjoyment and performance
	To assess personal food habits.	Have students identify which of the six classifications apply to them, to other family members or to their friends. Do they correspond with a combination of any two or more? Can they identify what function food performs for them? (I)
		LAB EXPERIENCE: In preparing a meal for one of the above, have students evaluate it in terms of ease of shopping, preparation, and service and cost. (B)
4. Time Management		
Family and individual values affect the allotment and use of time in the preparation of food.	To generalize that different lifestyles allow varying amounts of time for food procurement and preparation.	In comparing the priority levels placed on food preparation, have students predict how much emphasis might be placed on the use of convenience foods, the practice of restaurant eating, and the making of meals from scratch by: (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		- a young newly married couple, both working - a young couple with small children, one spouse working - an employed couple with three teenagers - three young people sharing an apartment, all working - mature grandparents who may or may not be of retirement age - a single employed parent with one pre-school child
D. INCOME		
Income makes an important contribution to nutritional standards, but sufficient income does not guarantee satisfactory nutrition.	To compare the proportion of income spent on food at different income levels.	To discover the proportion spent on food at different income levels, have students research the spending patterns of Canadian families. (A)
	To determine that nutritional status is related to income.	Have students interview a home economist with the Department of Health and Social Development on spending practices and the nutritional status of low-income Manitobans. Reference should be made to "Nutrition Canada Survey." (A)
		Student research should include an examination of operating programs assisting families with limited incomes to meet nutritional standards. (A)
		LAB EXPERIENCE: Have students plan (A) and prepare (B) an economical, nutrient dense meal.

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
E. EXPERIENCE AND ABILITIES Individual family members' skill and interest in food preparation contributes to the whole family's enjoyment of food.		
1. Family Abilities Many contemporary families depend on the contribution of all its members to function smoothly.	To analyze savings to the family food budget when skills and time of individual family members are utilized.	Working in pairs or groups representing "living units," have students divide the responsibilities involved in satisfying one week's food needs for the unit; e.g., planning, shopping, preparation, clean-up. (B) Following the completion of this assignment, have students discuss: "Were role allocations in your group based on ability, interest or tradition?" (A)
2. Personal Competence Food can be an excellent medium for creative expression and the development of a sense of competence.	To recognize the pleasure and sense of achievement experienced by the family member who uses time and talent in food preparation for the family.	LAB EXPERIENCE: Divide the class into groups and have a student from each group demonstrate the preparation of a food specialty. (B) Plan a recipe contest in the school using the following categories: (A) . nutritious snacks . low-calorie desserts . low-cost main dishes . vending-machine foods . lunch-box specials

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Excluding the cooks, form a tasting panel to select winners. LAB EXPERIENCE: Have students plan and prepare meals that can be prepared and served within twenty minutes; or that can be heated up for one member who works shifts. (A)
F. INFLUENCE OF EMPLOYMENT Employment schedules and demands are controlling factors in family food practices.		
1. Occupational Stress		
The occupational stress of each individual must be considered when planning and preparing family food needs.	To acknowledge that stress caused by employment demands can affect food patterns.	Have students interview a dietician or a doctor about employment stress necessitating special food practices. (A) Have student survey services utilized by family members to help them deal with stress and stress-related disorders. (A)
2. Food Services Available		
Cafeterias, vending machines and other food services can be used to supplement meals at work.	To appraise the types of workplace food services locally available.	Invite students to brainstorm about the employment food services available in the community (B) and discuss critically the advantages and disadvantages of each type. (A) LAB EXPERIENCE: Have students create an interesting but nourishing bag lunch that could be supplemented with foods from vending machines. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
G. INFLUENCING FOOD PREFERENCE		
Aesthetic appeal and attitudes affect personal food preference.	To appraise the influence of the aesthetic qualities of foods on food preference.	Have students conduct sensory experiments, e.g., change the colouring of foods, change the textures, to identify factors that affect "taste." (B) Instruct students to relate how a new food might be introduced into a family. (B)
	To recognize the effect of the media, family and peers on food preferences.	LAB EXPERIENCE: Have students prepare a meal using a new food that is unfamiliar to their families. (B) Have students develop an advertising campaign to promote a particular food by: (A) . arousing interest in the food through graphic description . developing a variety of recipes for preparing the food . preparing the food in the lab Have them evaluate the effectiveness of the campaign.
	To appraise personal changes and motivating influences in food preferences.	Have students chart changes in their food preferences over the last five years, identifying reasons for these changes. (A)

IV: MAJOR CONCEPT: Canada's Food Supply

MAJOR OBJECTIVES: To identify new foods and current information on food trends
To critically discuss factors affecting the Canadian food supply

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
A. FOODS USED IN CANADA AND THEIR SOURCES		
Canada's basic food supply is derived from its fishing and agricultural industries, supplemented by vital imported foods.		
1. Primary Food Products		
The degree to which Canada meets the food needs of its population is related to food production factors.	To assess the degree to which Canada is able to meet the food needs of its population.	Have students prepare and present individual research papers on one of the major Canadian food industries: wheat, meat, fish, diary products. (I)
	To analyze the components of Canada's primary food industry.	Using data from the Manitoba Agriculture census, have students make observations describing the types of farming operations in the local region. (I) Have them plot types of farming in Manitoba on a map of the province. (I)
	To recognize the importance of controlling production of supply.	Have students brainstorm for possible effects of having to import all food in Canada considering elements such as (I) . cost . lack of control over chemical use . imposition of trade embargoes as levers . interruption of supple due to war

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Assign students to study a country which lacks the ability to feed itself. (A)
	To examine the effect of climate, topography and urban growth upon Canada's capacity to produce an adequate food supply.	Have students prepare a bulletin board displaying newspaper clippings about current farming and fishing concerns. (B)
	To recognize the variety of food production enterprises.	Have students describe the characteristics of family, partnership, cooperative and communal farming. (A)
	To recognize factors influencing the costs in the primary industries.	Instruct students to develop a "seasonal" chart of food produce available in the local food market, indicating the month in which each food is most plentiful and least expensive. (B)
	To evaluate the role of organizations directly affecting food producers.	Have students research and report the function of food-related organizations such as marketing boards, producers' boards and contract systems. (A)
	To recognize the importance of soil conservation for future food production.	Show slides on the relationship of soil degradation/conservation to farming practices in Canada (made available by Prairie Farm Rehabilitation Assistance). (I)
2. Imported Food Products		
The vast variety of foods we enjoy is directly related to the importation of food products.	To appraise the importance of imported foods in meeting Canadian food needs.	Have students survey and test commonly used imported foods, identifying their sources. (B) Have students study a chocolate bar label to identify sources of ingredients. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Invite the class to brainstorm a list of imported food ingredients, rating their importance in the diet. (A)
3. Secondary Food Production		
With millions employed in the growing, processing, shipping and selling of food, the food industry represents a major national economic force.	To identify the types of food products made in Manitoba and the location of the manufacturing plant.	Have students identify the kinds of jobs available in food production and processing and quality controls within the plants. (B) Arrange a field trip to a food production plant. (A)
	To evaluate processes involved in the preparation and production of food products.	As part of a "promote Manitoba" week both in the lab and at home, have students set up displays and prepare food using Manitoba products. (A)
. Preservation Processes		
Food preservation has changed from the simple home processes of salting, drying, fermentation and smoking to more complicated technical processes.	To recognize processes involved in the preservation and production of food products. To compare preservation methods in terms of their advantages and disadvantages.	LAB EXPERIENCE: Have students prepare recipes using foods available in different market forms to determine their best use. (B) Have students differentiate between various methods of food preservation: (A) . irradiation . freeze drying . dehydrofreezing . dehydration . drying . salting . canning . freezing . fermentation

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To evaluate different market forms and their "best use."	Have students assess methods of preserving any vegetable or fruit juice by comparing the forms in which they are marketed, including fresh, frozen, canned or packaged (dried). Factors to be evaluated are cost, appearance, texture, taste, nutritional value, convenience and reliability. (A)
. Additives		
Additives affect the quality, appearance and flavor of foods.	To recognize that many "additives" occur naturally in foods.	Have students consult the Health Protection Branch Resource Kit on additives such as carrageenin and quat gum. (A) Have students identify and discuss the significance of poisons, such as strychnine and nitrates, which occur naturally in foods. (I)
	To identify the purpose of additives in food products.	Following an examination of labels to identify additives, have students research and report on the function of specific additives. (B)
	To discuss critically the implications of the use of additives.	Have students describe current research on additives and their relationship to behavior and health. (A)
	To predict the outcome of omitting additives.	Supervise a student debate on the benefits vs risks dilemma regarding the use of additives. (A) Have students brainstorm the effects of banning all additives, discussing the following consequences: (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. Foods rot readily. . Flour and cake mixes are quickly infested with grubs and insects. . Foods look unappetizing. . Pickles become soft and yellow. . Innovation of new food products is halted. . Cakes fall apart. . Custards, ice cream and dressings become unmarketable as emulsification becomes impossible. LAB EXPERIENCE: Conduct experiments in class to investigate the function of additives. (A) Have students refer to the learning package on additives prepared by the Health Protection Branch.
B. NEW FOOD PRODUCTS		
New food products are developed through modern innovations to appeal to contemporary consumers in their desire to meet the demands of modern living.	To identify the variety of new food products on the market and recognize the reasons for their development.	Have students visit a supermarket to discover products which were unavailable when they were in Grade 7. (B) Define the following terms: (B) . Traditional foods: (dietary staples) foods without added ingredients . Engineered foods: two or more foods combined to create a new food . Synthetic foods: foods produced in a laboratory from non-agricultural products (materials not ordinarily considered foods)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. Fabricated or designed foods: foods created by scientists for a particular purpose, such as convenience, cost, nutrition, space, travel, etc. . Formulated foods: food combinations that resemble food dishes made at home . Non-foods: edible products that are ingested and excreted in the same form; e.g., carboxymethyl cellulose, wood fibre in bread
1. Fabricated Foods Food technology has made it possible to make simulated food products, resembling other foods in texture, appearance and taste.	To determine the acceptability and palatability of fabricated food substitutes.	LAB EXPERIENCE: Using a substitute food, have students prepare and test the acceptability of a favorite recipe; e.g., margarine, bacon bits, whipped topping. (B) Have students investigate the importance of research in meeting North American as well as world food needs. Have them consider the possibilities of developing: . fabricated beverage with a soya base . fish flour--incaparina
2. Synthetic Foods and Non-Foods In the future, as natural foods become increasingly expensive and less available, more imitation foods will be developed.	To examine and differentiate between recent innovations in engineered foods.	Have students examine labels on packaged food to identify synthetic products. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To predict future trends and usefulness of synthetic food products.	Invite students to brainstorm on future trends and usefulness of synthetic food products. (I)
3. New Farm Products and Production Methods Improvements and innovations in farm practices greatly increase productivity.	To examine recent innovations in the farming industry.	Experiment with hydroponic and aeroponic gardening in the classroom. (B) Involve students in a discussion of the advantages of hydroponic and/or aeroponic gardening: . crops grown year round . water recycled, therefore less water required than for crops grown in fields . fertilizers recycled . pollution of streams eliminated Arrange a class visit to the University of Manitoba, Faculty of Agriculture, to find out what innovations are presently under research. (B) Invite an Agriculture Representative or community person with experience in these new forms of gardening to discuss changing agricultural practices. (B) LAB EXPERIENCE: Have students prepare bread using triticale flour. (B) Information on recent developments in hydroponic gardening can be obtained from Epcot Center, Disney World, Florida. (I)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students research recent farming developments: (A) • New Products and Hybrids - triticale (wheat and rye) - high protein cereal and potatoes • New Methods - multi-cropping to increase yield - high-yield seed varieties • Sea Farming - krill--shrimp-like creatures - high-protein algae - fish farming in enclosed bodies of water • Animal Husbandry - cross-breeding and selection of animals; e.g., beefalo (cattle and buffalo)
C. MARKETING		
A complex marketing system exists between producers and consumers of food products.	To identify the importance of an effective distribution system related to the food market.	Have students consult local resource people such as farmers, marketing board executives, farming specialists and media personnel to examine the steps involved in moving the grain from the fields into the cupboards of consumers. Marketing personnel include: (A) • grain elevator operators who purchase the raw grain from farmers • processors (e.g., Robin Hood) who purchase raw grain and produce flour • retailers or wholesalers who purchase from the processor to sell to the public

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students prepare flowcharts illustrating how foods are made available to the consumer, starting at the initial primary production. (A)
1. Marketing Process		
• Marketing Boards		
Local marketing boards perform the function of supporting prices as well as promoting Manitoba farm products.	To assess the role of local marketing boards.	Have students list the local food marketing boards: Egg, Turkey, Vegetable, Beef, Hog, Honey, Milk, Chicken, and Fish. (B) Have students contact representatives of any food marketing board to learn of their function in supporting prices that benefit producers and determining quota systems and disposal practices. (A) Involve students in a discussion of why such boards were established and predict the long-range effects on consumers and farmers should they be abolished. (B) Promotional posters or kits produced by marketing boards for classroom exhibits are to be examined by students. (B)
• Local Marketing		
Manitobans are actively involved in the production and retailing of home grown food products.	To recognize the availability of local food products.	Students are to collect and discuss television, magazine and newspaper advertisements promoting the use of specific products that are produced by marketing boards. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
• **Food Retail Stores**		
The emergence of supermarkets has changed retailer practices as well as consumer spending habits.	To compare the advantages and disadvantages to the consumer of different food retail outlets. To discuss critically the importance of having a variety of retail food outlets.	Give students an opportunity to visit a "U-Pick" market garden or a farmer's market to compare prices and quality with those in supermarkets. (B) Have students note the sources of produce sold in supermarkets. (B) Instruct students to make a chart listing the benefits and detriments of shopping in supermarkets, small independent grocers, specialty shops, or open markets (this is seasonal in Manitoba). (I) Have students interview family or friends to ascertain reasons for shopping in certain stores. (I) Theoretically, the huge supermarkets could put the independent retailer out of business. Engage students in a discussion of why this does not happen. (A) Have students describe the relationship between a franchisor and franchisee in the market of today. (A)
• **Oligopolies**		
Control of the food industry is becoming concentrated in the hands of a few companies.	To recognize that a few companies have control over all stages of food production and distribution.	Have students research the vertical integration under Canada Safeway, including:

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. stores (I.G.A.) . milk plants . ice cream factories . wholesale companies (Codville) . cheese-cutting plants . frozen food and beverage plants . trucking operations . soap companies
	To discover that food cooperatives are becoming multi-product conglomerates.	Using food packaging labels, have students identify ten different General Foods products. (B)
		As a class, think through the process of developing a product, processing it and marketing it to determine why conglomerates develop in the food industry today. (A)
	To recognize that food companies are often transnational.	Have students research the concerns regarding baby products produced by Nestle and the product list used in the boycott of the company during the late 1970s and early 1980s.
	To evaluate the effect of corporate control on both producer and consumer.	Have students read "The Valley of the Grocery Giants," C.A.C. Special Report, October 1984. (A)
. Technology and the Food Market		
Technology affects production, processing, distribution and marketing of food.	To identify forms of production technology and their effects on employment opportunities.	Arrange a class visit to a processing plant to identify forms of technology in use there (e.g., automation, computerization). Enquiries should center on the effects of automation on staff, equipment and working conditions. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To evaluate the effect of technology on food.	Have students review recent technological innovations in food production. (B)
	To identify the role of computers in the distribution of foods.	Have students interview a supermarket manager or head-clerk regarding functions, advantages and disadvantages of computerized cash registers and universal product codes. (B) Brainstorm about consumer effects of: (B) . lack of price tags . confusion regarding shelf pricing
	To analyze the effects of new technology on family lifestyle and food acquisition.	Pretest for awareness of home computer options including, (B) . computerized controls on appliances . telephone directory services . general information . games . horoscopes . bedtime stories . income tax advice . news . food and restaurant guide . ticket and travel reservations . home banking . home security . shopping information and purchasing . menu planning . recipe storage Have a computer salesperson demonstrate use of a menu storage and retrieval system and suggest capabilities related to foods. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		To determine how computers help businesses, have students survey businesses and organizations using computers. (A) Have students use computers for nutrition analysis. (A) Together with the class, research progress in the use of computers in Manitoba homes. (A) Have students interview several people to determine how time- and energy-saving technologies might affect lifestyle and food choice. (A)
. Specialty Stores Food "boutiques" not only have status appeal, but supply foods that are not available in other types of stores.	To evaluate the significance of commodity specialists in the marketplace.	Using a telephone directory, have students discover what specialists there are in food supplies and services; e.g., (B) . meat markets . green grocers . ethnic food stores
		Have students visit two or three of these stores to discover the degree of specialization and the extent of consumer appeal and also to compare prices. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
2. Pricing The price that consumers pay for food products is affected by local and world economic conditions as well as the cost of production, processing, and distribution.		
. Supply and Demand The law of supply and demand is a basic economic principle.	To analyze the effects of supply and demand in establishing prices for certain foodstuffs.	In discussing the factors that might affect food supply, have students consider the following elements: : (B) . weather . insects . crop disease Have students list foods that have been or are presently in short supply and are thus very high in price. (B) Ask students to formulate theories on why certain foods vary in price from season to season; e.g., steak is more expensive in summer and fruits and vegetables are less expensive in summer than in other seasons. (B) Demonstrate the concept of "demand-pull-inflation" by providing some students with an ample supply of hypothetical money, and others with a limited supply of goods to be sold for the best price in the classroom market. Have prices established by bidding and buying. (I)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		LAB EXPERIENCE: Have students prepare a food that is in great supply and low demand.
• Consumer Demand for Perfection		
Consumer demand for uniformity of shape and size and absence of blemishes affects overall food prices.	To discover the importance of aesthetic appeal in consumer choice.	Encourage students to enquire about what happens to "imperfect" food. (B) Have students interview store managers regarding the choice of "perfect" instead of second grade produce. (I) Have students discover retailers who handle: (A) . Grade C meat . commercial quality apples
• Retail Practices		
Awareness of retail practices encourages intelligent purchasing practices.	To identify and analyze marketing practices which encourage buying.	Review information on marketing practices. (A)
• Bulk Buying		
Bulk food buying is an alternative to purchasing pre-packaged, well-known brand name products.	To analyze the savings realized by families through the practice of bulk buying.	Discuss critically the pros and cons of bulk food buying. As students interview grocery store managers to determine the popularity of bulk buying, have them pose these questions: What percentage of consumer buying is of this nature? How has this affected the sales of the prepackaged goods? What actually is the saving realized by the consumer? (I)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
D. FOOD TRENDS		
Eating patterns are continually adapted in response to lifestyle needs, knowledge, technology, marketing strategies and current issues.	To identify current trends in the food industry.	Have students research and evaluate: (A) . changes in foods used in the last 25 years . new health controversies related to diet: - reduction of salt - elimination of red meat - reduction of animal fat - debate over organic vs inorganic foods - superiority of "natural" foods - adoption of a holistic approach to health
1. Creation of Food Trends		
. Effect of Advertising		
Advertisers are influential in producing alterations in eating patterns.	To assess the influence of advertising.	Identify advertisements which have affected students' eating habits, e.g., (A) . advertisements for a specific product or brand of product . advertisements promoting products to replace those posing health hazards, such as - cholesterol in butter and eggs; therefore, use egg substitutes, soft margarine or "lean" meats - salt; therefore, use salt substitutes - sugar; therefore, use artificial sweeteners - highly processed, additive-laden convenience foods; therefore, shop at health food stores

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. advertisements to encourage weight reduction . advertisements of new products . advertisements suggesting what foods are "in" or socially acceptable
	To demonstrate that advertisements can be misleading without actually making false claims.	Have students collect advertisements which mislead by suggestion; e.g., using nutrient tables, compare the amount of calcium in 250 grams of chocolate milk with that in 250 mL of milk.
. Effect of the Media		
The media has a powerful influence on public opinion.	To establish guidelines for evaluating claims and analyzing concerns found in magazines and books and on television and radio.	Instruct students to collect articles on foods and nutrition from current magazines and newspapers and have them evaluate the information in terms of the following: (A) . What is the writer's intent? Is it to sell a product or an idea? . What method does the writer use to sell the product? Does it make dramatic unsubstantiated claims using non-scientific terminology? . What sort of credentials does the researcher have? What about the data? Is it based on testimonials only? Solicit student reaction to these claims (from Focus on Nutrition): (A) "Certain foods are so high in particular nutrients that they possess miracle value or have curative powers for a whole host of common and uncommon diseases and illnesses."

"Pesticides and chemical fertilizers are poisonous and contribute undesirable residues to food. In addition, chemical or inorganic fertilizers produce products of inferior nutritional quality and in turn, inferior nutrition for animals and humans. Conversely, organic fertilizers are superior to chemical fertilizers."

"Foods are safer and more nutritious as they appear in nature; anything added to the food supply is potentially dangerous. There are too many chemicals in the food supply today."

Have students read excerpts such as these from books which advocate the health food movement, analyzing them in terms of their knowledge of health foods and nutrition. (A)

LAB EXPERIENCE: Using health foods, have students prepare a recipe found in a health food magazine or book and analyze it in terms of palatability and acceptability, nutritional quality and cost. (B)

V. MAJOR CONCEPT: Canadian Mosaic

MAJOR OBJECTIVE: To identify influences in the development of Canadian food practices

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
A. **CANADIAN HERITAGE** Canadian food ways evolved from the use of the natural resources at hand by Native and Pioneer peoples.		
1. **Native Food Ways**		
Native Canadians have used locally occurring foods to advantage.	To discover the interrelatedness of lifestyle and food ways of Native peoples.	Have students research and compare the causal relationship of food way to lifestyle of different Native groups: (A) . People of the Plains . Coastal Dwellers . Inuit
	To identify sources of nutrients in Native diets.	Referring to the research above, have them identify sources of nutrients: (A) . protein from game, poultry, and fish . calcium from fish bones . vitamin C from spruce tea and berries . fat from whole blubber and buffalo for high energy needs . iron from freshly killed seal liver for menstruating women

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
2. Foods of the Pioneer People		
Pioneers adapted food traditions and habits that they brought with them to local resources, developed methods of preservation, and imported necessities as they could.	To research preservation methods used by pioneers.	Have students read excerpts from *Centennial Food Guide*. Discuss pioneer foods in terms of hospitality, medical use, economic exchange and sustenance. (A)
	To discover the significance of food in the life of the pioneer.	
	To produce samples of pioneer foods.	LAB EXPERIENCE: Have students plan and prepare samples of pioneer foods (bannock, soups, breads, sourdough, game, taffy, beans, wild foods). (B)
	To research and discuss regional festivals and folklore concerning food.	Invite speakers to describe regional festivals and display typical food. (B) Have students attend a food festival. Have them organize and conduct a school food fesival. (A) Have students read about regional dishes in *The Canadian Cookbook*. (A)
	To prepare regional specialties from across Canada.	Have them research regional specialties: (A) . Maritimes seafood baked beans and steamed brown bread molasses fiddlehead greens dulce

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. Quebec maple syrup ragout pea soup . Ontario wild rice (northern area) blueberries lake trout fruits--peach cobbler . Manitoba goldeye, whitefish saskatoons sunflower seeds buckwheat honey buffalo game . British Columbia salmon fruit . Northwest Territories/Yukon arctic char LAB EXPERIENCE: Have students prepare a regional specialty. (B)
B. INFLUENCE OF IMMIGRATION ON CANADIAN FOOD WAYS		
1. Ethnic Groups and Cultural Contributions		
Canadian food ways are evolving from the contributions of the food patterns of many cultures.	To identify various Canadian communities which were settled by specific ethnic groups.	Have students use a map of Canada and/or Manitoba and/or Winnipeg to locate ethnic settlements. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students determine reasons for specific immigrant settlement in various parts of Canada. Have them consider if the availability of familiar food resources was a factor. (I)
	To investigate and appreciate the contributions of various cultures.	Have students research and present the cultural contributions for a chosen country or group in terms of: (A) . food resources . religious use of food . festival and ceremonies . meal patterns This could be done by: . reports . films . displays . food labs . speakers and demonstrations Conduct an ethnic food festival in your school. (A)
2. **Contribution of Commercial Enterprises to the Canadian Food Mosaic**		
The commercial food industry, restaurant service and cottage food industry have all contributed to the popularity of "ethnic" foods in Canada.	To discover all the sources of ethnic foods in your community.	Have students brainstorm to discover from where all the ethnic foods they have eaten in the past week have come. (B) Have students watch for advertisements of ethnic foods. (B)

VI. MAJOR CONCEPT: Global Food Issues

MAJOR OBJECTIVES: To identify traditions and be able to prepare meals that are typical of other parts of the world

To discuss critically ways of helping to solve world hunger problems and to accept some responsibility to act

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
A. EXPERIENCES IN INTERNATIONAL FOODS The study of international food practices includes a study of resources, traditions and cultural patterns.	To develop an awareness and appreciation of different food practices.	Have students research, plan, prepare and serve meals that would be typical of different countries. (A) Have them conduct a school International Food Festival. (A)
B. CANADIAN FOOD PROBLEMS Malnutrition is prevalent in Canada despite the availability of high quality foods.		
1. Canadian Nutritional Status Survey The most recent nutritional surveys in Canada indicate a low nutritional state amongst some Canadians despite affluence and surplus foods.	To create an awareness of current trends on Canadians' nutritional status.	Review the latest Canadian nutritional surveys and have students draw conclusions about the nutritional state of Canadians. Have students identify specific groups of people needing assistance with diets. Develop a promotional campaign to increase nutritional awareness. (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
2. "Killer" Diseases in Canada		
Nutrition-related "diseases of choice" have become an increasingly serious threat to optimum quality of life.	To identify the numerous diseases which are related to diet but not necessarily caused by diet.	Have students identify (I) and/or research (A) the following: Diet-related disorders: . peptic ulcers . dyspepsia . appendicitis . constipation . hemorrhoids . diarrhea . indigestion . malabsorption . nausea Circulatory disorders: . obesity . diabetes . arteriosclerosis Oral disorders: . dental caries . periodontal disease
	To collect information about factors posing personal health risks.	Have students assess their own position in relation to the high risk factors that have already begun to affect individual family members' health: (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. stress . obesity . aging . hereditary disorders . smoking . high cholesterol level . poor physical fitness . use of alcohol . high blood pressure . fad diets
	To assess the relationship between diet and life-threatening diseases.	In addition to listing life-threatening diseases believed to be associated with diets, have students explain the relationship between diet and the following: (B) . cancer . diabetes . cardiovascular disease Have students research the diets of Mormons and Seventh Day Adventists. Compared to the general North American population, these groups have a high consumption of milk, fruit and vegetables and a low intake of red meats. The Seventh Day Adventists avoid red meats altogether. Moreover, the diets of these two groups are free of alcohol, tobacco, coffee and tea. The discovery of a lower incidence of cancer of colon, stomach, breast and cervix within these groups may suggest a relationship between fat/ fibre intake and cancer. (A) Have students research Dr. D.P. Burkitt's theory that low-fibre diets cause many diseases within our civilization. (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To pursue a lifestyle reducing the potential for diet-related diseases.	Have students devise substitution lists for: (I) . foods high in cholesterol . foods high in sugar . foods low in fibre Have students bring five labels to class, examining each label for sources of "hidden" sugar. Have them list all the different words that could be found on labels which essentially mean "sugar." (I) LAB EXPERIENCE: Using cholesterol-free or low cholesterol food as well as fibre-rich foods, have students plan (A) and prepare (B) a breakfast or luncheon meal; e.g., cholesterol-free substitute, skim milk, unsaturated fat such as oil or soft margarine, low-fat cheese, whole grain cereals and bread, fresh fruit.
C. WORLD FOOD SHORTAGES The majority of the world's people are hungry. Geographic limitations, cultural biases, religious influences, education deficiencies, political ramifications and agricultural and technological problems are all aspects of the world's nutrition problem.	To be aware of world food issues.	Organize a student supermarket tour identifying foods that are imported, discussing issues that are related (i.e., economic, political, etc.). LAB EXPERIENCE: Have students prepare and serve a "Hunger Awareness" dinner, where one in ten students gets a full course meal and the rest get just a bowl of rice and water. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
1. Causes of Shortages		
. Limited Resources		
World food shortages are caused by crop failures, population growth, limited resources and world markets.	To identify causes of food shortages.	Pretest for knowledge on the world hunger situation. (I) To discover reasons for food shortages, have students read "Can the World Feed Its People?" in National Geographic or other similar resources. (A) Have students research and write a term paper on causes of food shortages. (A)
	To identify world food shortages resulting from limited resources.	Together with the students, discuss causes of world food shortages, considering harmful farming practices, soil erosion, topography, lack of usable land, accessibility of water, fertilizer, technology, agricultural information, use of wood fuel, plant disease, pests, over-population, and inclement climate conditions. (B)
. Political Factors		
The "have" countries as well as the "have not" contribute to world food shortages.	To identify political factors contributing to world food shortages.	Have students collect information from relief organizations such as UNICEF or CARE which identify food storage problems other than those related to limitations of natural resources: (B) . inequitable distribution of food . maldistribution of wealth . misuse of large areas of land for growing "cash crops" such as sugar or bananas to export to rich countries, rather than growing needed food for the native population

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		• land tenure • ravages of war, including destruction of land, property and human resources
• **Economic Factors** Economic poverty is not restricted to individuals but may include entire countries.	To identify economic factors contributing to world food shortages.	Have students discuss how a country's food supply could be affected by the lack of: (B) • purchasing power for fertilizer, machinery and seeds • research for the development of more suitable farming methods and strains of cattle and seeds • efficient food delivery, storage and preservation systems
• **Social Factors** Religious and social practices may restrict the use of available protein.	To identify social factors contributing to world food shortages.	Have students discuss the dietary effects of religious taboos and social factors such as: (B) • the practice of feeding men and "important" people first, while women and children get leftovers • superstition about health and misdiagnosis and improper treatment of disease; e.g., malnutrition may be falsely viewed as a symptom of sibling rivalry

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. perception of disease as an evil spell . belief in witch doctors . religious imposition of dietary restrictions; e.g., Hindus do not eat meat, and Moslems and Jews do not eat pork . emulation of western lifestyle, resulting in the use of baby formula instead of breast milk . conformity to the belief that status is gained by the use of particular foods and avoidance of others
2. Effects on the Individual Hunger is a condition of misery, suffering and human degradation. . Malnutrition		
Malnutrition is a condition of deficiency of required nutrients.	To compare malnutrition with undernutrition.	Have students read and discuss case studies of victims of nutritional deficiency. (B)
	To describe the deficiency diseases.	Have students collect pictures from CARE or UNICEF illustrating the physical effects of deficiency of food (marasmus) or specific nutrients (beriberi, pellegra, kwashiorkor, ariboflavinosis, goiter, scurvey, rickets, anemia). (B)
		Have them discuss the causes and cures of these deficiency diseases. (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
• Undernutrition Undernutrition indicates an inadequate quantity of food.	To describe progressive physical and mental changes associated with starvation.	Present a case study which allows students to imagine what life is like for the starving poor. Include in the case study not only a description of the living conditions of the poor, but the physical and mental impact of starvation on: (B) • appearance • skin and hair • behavior • mental development • body composition Have students discuss a current food crisis or recent famine. (A)
	To appraise the impact of famine and starvation on social interaction and socio-economic problems.	Referring to Maslow's hierarchy, have students assess the impact of starvation on the progressive development of individuals. (A) Have students use the hierarchy to assess the impact of starvation on the development of the entire country; i.e., can an underdeveloped country become developed while its inhabitants are starving? (A) Students should contact administrators of school food programs to discover what breakfast, lunch, or milk programs are available in local schools and also to determine the goals of the program as well as the impact thus far on the behavior and performance of the students who participate. (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
. Eating Habits Personal eating habits are very difficult to change because they are private habits which may be based on superstitions or on religious beliefs and are closely associated with emotional reaction, not just rational understanding.	To evaluate ways of introducing new foods and changing old habits.	Instruct students to review Learning Better Nutrition. (B) LAB EXPERIENCE: Have students prepare a single food disguised in as many ways as necessary to make it acceptable to the entire class; e.g., liver, fish, milk. (B) LAB EXPERIENCE: Have students conduct a taste experiment using protein alternatives; e.g., lentil and bean dishes, meat analogues, cheese dishes. (I)
3. Solving the Problem Solutions to world food problems will involve co-operation between developed and developing countries and an understanding of causes.	To differentiate between acute and chronic food shortage.	Have students analyze a list of causes of food shortages. (I)
	To discover ways in which food supplies could be increased in less developed countries.	Invite a representative of UNICEF to explain how "have" countries are aiding "have not" countries: (B) . lending specialists and technical advisors . offering nutrition education programs . conducting food research; e.g., development of protein supplements, cultivation of "new" plants and animals, use of space technology to dry grain . supplying low-interest loans to allow the testing of new farming techniques
		Have students collect newspaper and magazine articles dealing with the world food problem. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Selecting an underdeveloped country, have students report on what is being done to increase the food supply. (A)
		Have students research the latest international approach to solving food problems: (A) . development of grass roots approach . concern for appropriate technology . imposition of boycotts . matching groups such as home economists
	To identify organizations which help to alleviate world food crisis.	Have students watch for relief advertisements or documentary specials on television. (B)
		Have them list relief organizations and their functions. (A)
		If the school sponsors a child, have students discover the organization that is responsible for administering the assistance, determine how the money is distributed and assess the effectiveness of such a program. (A)
		Brainstorm for solutions to the world food program, having students list all solutions. (A)
		Have students create a ladder of relief possibilities, ranging from least effective to most effective:

____ least effective

______

____

____

____

____

____

__________________ most

____________________ effective

Have students evaluate possible solutions for relief of acute shortage as opposed to chronic shortage. (A)

VII: MAJOR CONCEPT: Careers in Food

MAJOR OBJECTIVE: To recognize career opportunities in food science, business, industrial services, and dietetics

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
A. GAINING EXPERIENCE		
1. Quantity Food Planning		
Quantity food production requires that all operations proceed with the least expenditure of time, effort, material and money.	To identify the aspects of organization and planning required in food production.	Have students propose a food production plan and identify: (B) . the menu . work schedules . buying practices
Menu planning is the focal point of all food production operations.	To describe the factors requiring consideration when developing menus.	Whether planning menus for a banquet, a hospital, a school residence, or a cafeteria, have students list the considerations in menu planning: (B) . acceptability to clients determined by race, religion, food habits, age, sex, activity levels, and economic status . nutritional adequacy . availability of working space and equipment and the capabilities of personnel . limitations of operational budget

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To develop suitable menus.	Have students plan a suitable and nutritious menu for a selected group and number of individuals, outlining information such as race and religion, which must be taken into consideration when selecting foods. (I) Have them describe the space and equipment requirements as well as food preparation skills necessary to prepare such a menu. (I)
	To practice recipe costing.	In preparation for devising a recipe cost sheet to determine the total cost of the selected menu, as well as cost per serving, have students consult cookbooks, community colleges, restauranteurs and libraries for information regarding the amounts of prepared food required for specific numbers of people as well as average serving yields from common foods, such as one loaf of bread or one tin of fruit. Once quantities have been determined, have students devise the cost sheet for all ingredients. Include total cost of amounts purchased, cost of amounts actually used and cost of losses. (I) Provide students with sample menus for specific numbers of patrons to practice determining food quantities required. (I) Provide students with sample recipe costing problems for different foods and meals; e.g., a simple cake, a complete breakfast, an inexpensive luncheon, an appetizer. (I)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
The purpose of work schedules is to get tasks done in the best way, in the shortest time and with the least effort, while at the same time retaining nutrients and quality of food.	To identify procedures for making a work schedule.	Have students analyze the requirements for developing a good work schedule. (I) Variables to be included: . list of jobs to be done, grouped into units . assigning of specific jobs . avoidance of cross organization . dovetailing . ensured use of time schedule
	To prepare work schedule.	Have students develop complete worksheets for the preparation of a given meal serving 200 people and using only four workers. (I)
The quality of ingredients purchased helps determine the quality of the finished product.	To organize guidelines for developing wise food purchasing and storage strategies.	Instruct students to collect information on the market prices of food by: (I) . comparing prices of foods at different food outlets . collecting newspaper advertisements which demonstrate seasonal cost variations in certain foods . interviewing food store managers or restauranteurs . determining where and when best food prices for specific food items are available
2. Quantity Food Production Successful food production requires training and skill of food service personnel.	To examine the vast and varied knowledge required of food service personnel.	Initiate a brainstorming session where students are asked to list what must be learned before one can become a successful chef. (B) Together with the class, visit the kitchen of a large restaurant, other food service or a training centre for chefs. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students list the activities of the personnel, analyzing them in terms of the knowledge that is required to carry them out, including a knowledge of: (I) . specific foods such as spices, fruits, vegetables, cheese, meat, fish, appetizers, soups, sauces, salads, garnishes, beverages, desserts, pastry, cereals, pastas, eggs . different styles of services such as buffet, banquet, fast food . terminology . ordering, costing and budgeting of food . use of equipment . sanitation and accident prevention . food distribution and serving of food . cookery methods and organization . customer and employee relations
Experimentation and practice is required to determine the suitability of recipes for quantity production.	To apply procedures of quantity food production: . enlarging recipes . preserving quality To practice enlarging standard recipes.	LAB EXPERIENCE: Have students conduct the following procedures for enlarging a recipe suitable for quantity production: (I) . Evaluate the practicality of revising a recipe in terms of method, cost, yield. . Double the recipe and have taste panel test results; repeat if necessary. . Enlarge the recipe to 25, 50, 100, or more times the original amount, making necessary modifications as to time, temperature and methods.

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. Convert amounts to weights where possible. Check figures for accuracy. Usually decrease seasoning amounts. . Make tests by running popularity, cost and yield studies.
Quality food is achieved by preventing losses or undesirable changes from the point of purchasing to the serving of the food.	To discover the optimum time, methods, temperatures and serving procedures for quantity cooking that will best preserve nutritive and other qualitative values in all common foods.	LAB EXPERIENCE: Have students conduct the following studies according to specified instructions: (I) . Studies on color and appearance change: Cook a green vegetable, such as spinach, by steaming and by boiling in water. Note differences in cooking time. Compare color and quality changes. . Studies on flavor change: Make coffee. Hold samples for various lengths of time and compare flavor. . Studies on changes in consistency: Make chocolate pie. Cover some, leave others open. Check consistency one hour later, four hours later, overnight. Compare results. Ask students to compile a general list of commandments to serve as a guideline for establishing the best possible quality in food production: (I)

- Establish good marketing habits--buy fresh products.
- Store foods at the proper temperature.
- Avoid extended storage of food products.
- Shorten and improve preparation methods.
- Use proper cooking methods which preserve nutrients, flavor, texture.
- Avoid long and improper holding after cooking.

Solicit student participation in devising a quality food checklist. (I)

Have students analyze the following problems, explain the principles involved and suggest corrections to avoid undesirable results: (A)

- curdled soup
- watery mashed potatoes
- watery scrambled eggs
- curdled scalloped potatoes
- discolored spinach
- leaky salads
- thin lemon pie filling
- tunnels in muffins
- crystallized frosting
- discolored fruit
- tough gelatin

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To practice quantity food production.	LAB EXPERIENCE: Have students plan and prepare a food sale for the school, following the necessary procedures applicable to menu planning, budgeting, work schedules, buying, recipe conversions and quality control (using a quality food checklist). (I) Have them analyze the results and determine why problems (if any) arose, suggesting methods for alleviating them. (I)
B. VOCATIONAL CHOICES The food industry employs millions of persons in a wide variety of jobs, representing all interests, educational levels and abilities. With a growing population and increased consumer demands, career opportunities will continue to expand within Canada and abroad. Vocational choice within the food industry depends on personal skills, knowledge and interest, as well as job opportunities and available training.	To discover the job opportunities within the food industry in production, processing, distribution and merchandising.	Have students investigate the range of training opportunities available in the areas of food and nutrition, beginning with programs offered in the immediate school. (B) Brainstorm, listing food and nutrition-related jobs or careers. Have students determine the training or schooling required for each, including any "on the job training programs" an organization might offer. (B) In addition to discussing career advancement opportunities in terms of these different jobs, have students assess the career opportunities in terms of locale; e.g., rural community as compared to large city. (B)
	To analyze personal aptitudes and academic training needed for specific careers.	Ask students to select a food-related occupation of interest to them and research the requirements for employment in this job. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students interview a restaurant manager and prepare a checklist of desirable personal qualities needed that a prospective employee might have. (I)
1. Entry Level Jobs Entry level jobs require a willingness to learn or facility in a skill that can be learned quickly.	To collect information about entry level jobs.	Have students discuss employment opportunities, pay scales, training or educational requirements, degree of job responsibility and possibility for advancements associated with entry level jobs. (B)
		Invite a waiter or waitress to class. Have students ask about specific services offered in the job, learning strategies involved and other helpful things. (B)
	To analyze the personal qualifications required for entry level jobs.	Have students list and explain the characteristics of good restaurant service and, therefore, the personality characteristics required to excel in restaurant work. (B)
		Organize a job application role play by students. (B)
		Initiate a student discussion on the meaning of the phrase, "serving the customer." (B)
		Have students role play handling difficult situations involving: (B) . an intoxicated customer . an obnoxious, demanding customer . a loud family or group of people . a waiter who forgets to order a customer's meal . a busser who spills dishes on a customer

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Instruct students to visit a local restaurant or food store and evaluate the effectiveness of employees. (I)
2. Skilled Vocations		
Particular food-related vocations require skilled workers with training and/or experience beyond the entry level.	To recognize the training and aptitudes required at the skilled level.	Have students interview skilled workers in food services jobs to determine the training required, the career potentials of the job, the level of responsibility demanded, and the pay level to be expected. (B) Have them list vocations which fall into the category of skilled work. (B) Drawing upon a list of different chefs in the community, such as pastry chefs, garde-manger chefs, and broiler chefs, have students conduct interviews to find out how they received their training, what their plans are for the future, and how they feel about their vocation. (B) Arrange a class visit to a community college to see the food services training area. (B)
. (Home) Catering		
A caterer is a company or corporation specializing in the supply of food and related services on a contract basis.	To investigate the different types of catering.	Brainstorm, listing where individuals, groups or companies utilize the services of a caterer: (B) . hospitals . schools . industries (large companies) . transportation conveyances--air, sea, rail . homes

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		• luncheon clubs or meeting halls (includes receptions) • mobile units
	To interpret the reasons for the popularity of catering.	Have students list popular occasions for using the services of a caterer. (B)
		In view of contemporary society which is highly specialized and very active, have students suggest reasons for the popular use of catering services. Have them interview local caterers for reasons. (I)
	To examine the job requirements of a caterer.	Have students interview local caterers for job requirements. (B)
		Arrange a visit to a caterer's kitchen and have students take notes on how this food service differs from that of a restaurant.
• Private Businesses		
Sole proprietorship refers to individuals who are in business by and for themselves.	To investigate the requirements for establishing a private business.	Invite business consultants or private business owners to class to describe the steps and requirements in establishing a business. (I)
		Have students collect statistical data on the life expectancy of private business. (A)
	To discuss critically the advantages and disadvantages of sole proprietorship.	Collecting information through interviews or research, have students discuss the pros and cons of private ownership. (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Selecting several large restaurants, have students trace whether they are owned privately or corporately. If operated privately, have them investigate other businesses owned by the same individual. (A)
• Large Businesses The food service industry is composed of several million entrepreneurs. Some are private, while others are part of corporations involving investments and, therefore, ownership by several people.	To define and describe a corporation. To distinguish between large corporately owned business and privately owned business.	Have students research the corporate ownership of a selected restaurant chain. In comparing the advantages and disadvantages of private business to corporately owned business, have students consider profits and losses, ease and freedom of organization, satisfaction and incentive, size limitations, opportunities for employees. (A) Arrange to have students see "behind the scenes" at both a private and corporate business. Have students describe the obvious differences. (A)
3. Management Careers Management is a catchall phrase referring to an individual or a group making decisions and assigning work to others.	To discuss the role of different managers in food-related positions.	Have students trace the levels of management in small independent restaurants or grocery stores, comparing to levels of management in huge chains. Have them discuss the following roles: (I) • Top executives in large corporations (finance, real estate, construction, labor relations, general policy). Little or no food-related background necessary. Generally degree required.

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		. Middle management. May be independent owners or hired by corporation. Holds various positions, including director of hotel or restaurant, catering manager, manager trainee, travelling manager. . Supervisor. Generally works directly with production staff monitoring productivity (food service supervisor, kitchen supervisor).
4. Professional Careers Professional careers require specialized training at the college level or beyond.	To generalize that an intensive study in a particular field is a major prerequisite for assuming professional responsibilities.	Have students list professional careers related to the foods and nutrition industry; e.g., dietician, home economist in business (hydro company, gas company, large food company), teacher, media or communications personnel (food editor, freelance writer). (I) Plan a student field trip: (I) . Visit a hospital to see the diet kitchen and the dieticians at work. . Visit a food manufacturer to discover the role of the food chemist. . Visit Manitoba Agriculture inspectors.

VIII: MAJOR CONCEPT: Planning, Preparing and Serving Meals

MAJOR OBJECTIVE: To apply knowledge of and develop skills in planning, preparing and serving of meals

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
A. MEETING FAMILY NEEDS		
The ability to analyze family food needs and apply resources to successfully satisfy them requires study and practice.	To plan, prepare and serve meals to suit different family needs for different occasions.	Present case studies, asking students to solve the specified problem for each family by planning (A) and/or preparing (B) and serving a meal that could be suitable for that family on the particular occasion: 1. Mr. and Mrs. A. both get home from work at 5:00 p.m. They wish to entertain Mr. and Mrs. B. for dinner before going to the theatre at 7:30 p.m.. Plan a suitable menu and do a time plan. 2. Harry P. is a single parent with three teenaged sons, all of whom arrive home for dinner at different hours. He needs to be able to prepare one high energy meal that all of them could heat up for themselves when they come home--before dashing out to another ball game. Plan a dinner. 3. Mrs. C. has two pre-school-aged children and is pregnant again. She has little time to spend on fancy meals but needs a well-balanced diet for herself, her husband and the little girls. Plan a day's menu and prepare a meal.

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		4. After Christmas the Jones family decided they all needed to reduce their calorie intake to 1500 calories per day. However, they often entertain and would like to serve attractive meals both for guests and themselves. Plan a suitable luncheon for four, using leftover turkey in the main course. Refer to "Significance of Food," and "Family Aspects of Food and Health."
B. MANAGEMENT SKILLS		
1. Selecting and Purchasing		
Wise food purchasing involves getting the most nutritious and enjoyable food for the least amount of money.	To recognize that lifestyle, family composition and size, budget, preparation time, availability of foods, and family food preferences all affect the planning of menus and purchasing of foods.	Play "The Detective Game" by creating three shopping carts full of groceries, and having students deduce who might have made the purchases, explaining the "clues" used. (I) Have students make a shopping list (B) and plan a menu for a meal for twelve people which can cost no more than a specific dollar figure (e.g., $5.00 per person). (I)
	To complete a useful shopping list considering foods on hand, advertised specials, planned menus, and store layout.	Have them analyze and list all the factors to consider in planning the meal and making the list. (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To identify and analyze marketing practices which encourage impulse buying and overbuying.	Have students visit a supermarket and list all the sales "techniques" evident: (B) . pre-packaging in large portions . eye-level placement . store layout . bakery fragrance . displays at cash registers . end-of-counter displays . games and free prizes . front-facing display space . bin displays . free samples . "taste" samples . coupons . piped music . color and mobiles
	To evaluate "sales," identifying in-store specials, loss leaders and nationally advertised product sales.	Discuss "When a sale is not a bargain" and have students substantiate the statement with examples. (A)
	To discuss critically advantages and disadvantages of different kinds of stores.	Students should visit a convenience store, specialty store, farmers' market, supermarket and discount store to identify similarities and differences in marketing practices, services and prices. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
2. Nutrient Preservation in Food Preparation		
Nutrient preservation in food preparation is dependent upon the nature of the nutrient and the preservation and storage methods used.	To discuss critically conditions which reduce nutrient levels.	LAB EXPERIENCE: Have students do comparison studies of a variety of cooking methods, using the research previously done to evaluate each method as to nutrient retention. (B) For example: . Have them prepare broccoli by: - stir frying - baking - microwave cooking - steaming - broiling LAB EXPERIENCE: Reinforce nutrient retention cooking skills developed in junior high. (B) Have students research the effects on nutrients of: (A) . water . oxidation . acid . alkali . heat . microwaves . light
	To evaluate the nutrient losses in the various techniques of food preservation.	LAB EXPERIENCE: Have students prepare relish, jam and jelly, as well as can and freeze vegetables. (B)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students research the following procedures: (A) . freeze drying . dehydrofreezing . pasteurization . ultraheat treating (milk) . dehydration . drying . radiation
		Have students do a Market Form Comparison of a product, considering: (A) . sensory qualities . price . preparation time . reliability . ease of preparation . nutritional value
3. Energy Conservation Use of limited energy resources requires careful monitoring.	To analyze ways to reduce energy use.	LAB EXPERIENCE: Have students prepare meals that are energy-wise: (B) . an oven meal . a casserole "meal-in-one" dish . a crock pot "meal-in-one" dish
		Lead a student debate on the topic: "Energy conservation requires a drastic change in lifestyle." (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Identify the ten appliances families use most often. Have students research energy consumption of each, and compute usage cost per month. Have them suggest five ways a family could reduce energy consumption. (A)
4. Time Planning For some meal managers, time management is as important as money management.	To analyze ways to use time and personal energy to advantage.	Brainstorm ways to: (B) . save time in food preparation; e.g., making double and freezing half . manage time; e.g., automatic timers on ovens LAB EXPERIENCE: Have students plan (A), prepare (B) and serve a "half-hour" meal.
C. SANITATION AND SAFETY		
1. Sanitation		
Improper handling of food is the major cause of food-borne illness.	To discover proper methods of preparing, serving and storing foods to prevent food-borne illnesses.	Have students research the cause and prevention of the common types of food poisoning: (A) . staphylococcal . salmonella . perfringens (clostridium) . botulism
	To determine standards for personal hygiene and kitchen cleanliness to prevent food-borne illness.	Using research above, have students develop a list of good food handling practices. (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To identify other food-related illnesses.	Have students research the cause and prevention of: (A) . trichinosis . infectious hepatitis (shellfish) . illnesses caused by natural poisons, e.g.; mushrooms, rhubarb leaves . food-transmitted parasites and viruses
2. Safety		
Kitchen accidents are often due to ignorance and carelessness.	To determine the most common accidents in the kitchen so as to prevent them.	Have students develop a safety checklist for a home kitchen. (B) Have them form a safety inspection unit. (A)
D. AESTHETIC APPEAL		
Food combinations, plate arrangements, garnishes and service are all important to the aesthetic appeal of a meal.	To plan and prepare meals with a wide variety in color, flavor, texture and temperature.	LAB EXPERIENCE: Have students conduct a sensory panel identifying odors and flavors of spices and herbs, combinations of spices and herbs, and ingredients in foods. (B) LAB EXPERIENCE: Have students try variations of seasonings in making a soup. (B) Have them prepare a quick bread that would be suitable to serve with the soup. (B)
	To evaluate meals prepared in class.	Have students devise meal evaluation forms to be used by the class. (A)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To discuss critically menus planned for a variety of situations.	LAB EXPERIENCE: Have students plan (A), prepare (B) and serve meals for various situations, taking into account concerns of time, money management and nutritional needs. Using evaluation forms as a basis for discussion have students assess: (B) . the menus before preparation . the meals as prepared and served
E. SCIENCE IN FOOD PREPARATION		
Understanding composition of food as well as the physical and chemical changes that occur in the preparation of food is essential to the production of fine quality foods.		Correlate the following experiment with appropriate lab experiences in the People, Food and Science workbook.
	To discover the fat and carbohydrate composition of foods.	Have students determine the presence of carbohydrates in food using an iodine solution. B) Have students determine the presence of fat in food by rubbing on unglazed paper. (B)
	To compare the stability of several kinds of fats.	Have students discover the melting points and smoking points of commonly used fats. (B)
	To determine factors that affect carbohydrate foods.	Have students study the effect of dry heat on sugar. (B) Have students study the properties of various sugars and the effect of added ingredients on crystal formation. (I)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
	To determine what affects the acceptability of food.	Have students study the effect of texture and color on the acceptability of food. (B) Have students study some of the factors which influence the texture of frozen desserts. (I)
	To determine factors that affect the quality of baked goods.	Have students study the effects of variations of ingredients on the texture, color and flavor of yeast breads. (B) Have students study the effects of different amounts of mixing on the quality of muffins. (B) Have students study how the recipe and mixing procedures affect the quality of pastry for pies. (I) Have students study the effect on the color and flavor of chocolate cake when experimenting with variations: (I) . in the acidity of the batter . in liquid and leavening agent Have students discover the protein quality in various kinds of flour and identify its function in baked goods. (I)
	To determine factors that influence the quality of products made with milk, cheese or designed "milk products."	Have students compare the palatability of various forms of milk. (B) Have students study the palatability of chocolate milk prepared with various milks. (I) Have students study the effect of temperature on milk clotted by the addition of rennin. (I)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students study the effect of added ingredients on the texture of cream soup. (I)
		Have students study the effect of temperature upon the texture and consistency of cheese. (I)
		Have students study various forms of whipped toppings to discover the effect of chilling, adding sugar, and altering butterfat content. (I)
	To determine factors that influence the quality of egg products.	Have students study the stability of egg white foams. (I)
		Have students determine the effect of temperature and cooking time on texture and flavor of eggs cooked in the shell. (I)
		Have students study the effect of dilution of egg protein on gel strength (e.g., custard). (I)
		Have students study the effect of variations in amounts of cream of tartar and baking conditions on the texture, flavor and color of angel food cake. (I)
		Have students discover the effect of heat on the connective tissue of beef. (B)
	To analyze factors that affect the palatability and texture of meat and fish products.	Have students study the effect of varying rates of heat penetration on meat, as in broiling and roasting. (I)

SUBTOPICS AND GENERALIZATIONS	OBJECTIVES	SUGGESTED ACTIVITIES
		Have students study the effect of oven temperature and length of cooking time on fish. (I)
	To discover factors that affect quality of preserved food.	Have students compare muffins prepared from previously frozen batter with muffins frozen after baking. (B)
		Have students study the effect of blanching before freezing on the color, texture and flavor of frozen vegetables. (I)

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